

G210

3:970-972

CATALOG

1970-1972



North Carolina State Library
Raleigh

N. C.
Doc.

CENTRAL CAROLINA TECHNICAL INSTITUTE

CENTRAL CAROLINA
TECHNICAL INSTITUTE



1970

JANUARY

SMTWTFSS

12345678910111213141516171819202122232425262728293031

FEBRUARY

SMTWTFSS

12345678910111213141516171819202122232425262728

MARCH

SMTWTFSS

12345678910111213141516171819202122232425262728293031

APRIL

SMTWTFSS

123456789101112131415161718192021222324252627282930

MAY

SMTWTFSS

12345678910111213141516171819202122232425262728293031

JUNE

SMTWTFSS

123456789101112131415161718192021222324252627282930

JULY

SMTWTFSS

12345678910111213141516171819202122232425262728293031

AUGUST

SMTWTFSS

12345678910111213141516171819202122232425262728293031

SEPTEMBER

SMTWTFSS

123456789101112131415161718192021222324252627282930

OCTOBER

SMTWTFSS

12345678910111213141516171819202122232425262728293031

NOVEMBER

SMTWTFSS

123456789101112131415161718192021222324252627282930

DECEMBER

SMTWTFSS

12345678910111213141516171819202122232425262728293031

1971

JANUARY

SMTWTFSS

12345678910111213141516171819202122232425262728293031

FEBRUARY

SMTWTFSS

12345678910111213141516171819202122232425262728

MARCH

SMTWTFSS

12345678910111213141516171819202122232425262728293031

APRIL

SMTWTFSS

123456789101112131415161718192021222324252627282930

MAY

SMTWTFSS

12345678910111213141516171819202122232425262728293031

JUNE

SMTWTFSS

123456789101112131415161718192021222324252627282930

JULY

SMTWTFSS

12345678910111213141516171819202122232425262728293031

AUGUST

SMTWTFSS

12345678910111213141516171819202122232425262728293031

SEPTEMBER

SMTWTFSS

123456789101112131415161718192021222324252627282930

OCTOBER

SMTWTFSS

12345678910111213141516171819202122232425262728293031

NOVEMBER

SMTWTFSS

123456789101112131415161718192021222324252627282930

DECEMBER

SMTWTFSS

12345678910111213141516171819202122232425262728293031

1972

JANUARY

SMTWTFSS

1

2345678

9101112131415

16171819202122

23242526272829

3031

FEBRUARY

SMTWTFSS

12345

6789101112

13141516171819

20212223242526

272829

MARCH

SMTWTFSS

1234

567891011

12131415161718

19202122232425

262728293031

APRIL

SMTWTFSS

1

2345678

9101112131415

16171819202122

23242526272829

30

MAY

SMTWTFSS

123456

78910111213

14151617181920

21222324252627

28293031

JUNE

SMTWTFSS

123

45678910

11121314151617

18192021222324

252627282930

JULY

SMTWTFSS

1

2345678

9101112131415

16171819202122

23242526272829

3031

AUGUST

SMTWTFSS

12345

6789101112

13141516171819

20212223242526

2728293031

SEPTEMBER

SMTWTFSS

12

3456789

10111213141516

17181920212223

24252627282930

OCTOBER

SMTWTFSS

1234567

891011121314

15161718192021

22232425262728

293031

NOVEMBER

SMTWTFSS

1234

567891011

12131415161718

19202122232425

2627282930

DECEMBER

SMTWTFSS

12

3456789

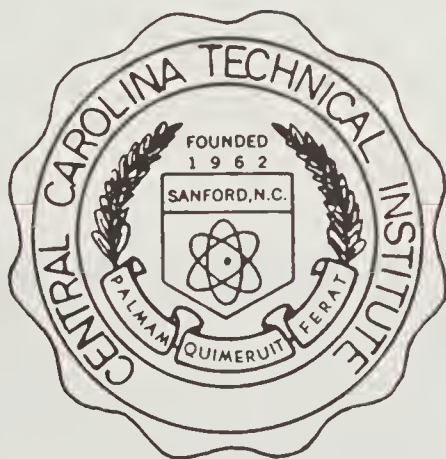
10111213141516

17181920212223

24252627282930

31

CENTRAL CAROLINA TECHNICAL INSTITUTE



GENERAL CATALOG 1970-1972

ROUTE 2, BOX 55, SANFORD, NORTH CAROLINA 27330
PHONE (919) 775-5401



TABLE OF CONTENTS

School Calendar	5
Board of Trustees	7
Administrative Staff	8
Faculty	8
Office and General Staff	9
The Institute	10
Purposes of the Institute	10
Admission Procedures	11
Expenses	13
Financial Assistance	14
Academic Information	16
Conduct and Standards	18
Student Activities and Services	19
Student Personnel Services	20
Library Services — Learning Resource Center	21
G.E.D.	22
Guided Studies	22
Agricultural Business and Research Technology	23
Automotive Mechanics	25
Business Administration Technology	28
Business Administration: Accounting Option	30
Campbell College Transfer and/or General Education	33
Drafting and Design — Mechanical Technology	35
Electronics Technology	38
Industrial Maintenance Mechanics — Electromechanical	40
Machinist	42
Police Science Technology	44
Practical Nurse Education	47
Radio-TV Broadcasting	50
Secretarial Science	52
Tool Maker	54
Veterinary Medical Technology	56
North Carolina School of Telephony	59
Course Descriptions	60-91
Adult High School Diploma	92
Adult Education	93
The Fundamentals Learning Laboratory	94
The Extension Program	96

Central Carolina Technical Institute
DEPARTMENT OF COMMUNITY COLLEGES
KELLY DRIVE
ROUTE 2, BOX 55
SANFORD, NORTH CAROLINA 27330



OFFICE OF THE PRESIDENT

A MESSAGE FROM THE PRESIDENT:

Central Carolina Technical Institute is a member of the Community College System of North Carolina; thus, it embraces and supports the "Open Door" admissions policy. It is our intention to serve any student who wishes to apply who may benefit from the programs here.

Any student who comes to this institute has the right to expect competent, well trained teachers who will demonstrate an awareness of the individual needs of each student. Every effort has been made to secure such a staff.

In addition to a diversified program in vocational and technical education, a student will find supportive activities to challenge the mind and account for leisure time. There has been a determined effort to provide for wholesome activities to prepare the student for competence and happiness in the world of work. The instructional programs are so planned and up-dated as to allow for maximum success in securing and retaining employment.

Programs for self-improvement of the adult community are also available. Classes whereby adults may improve existing skills, achieve competency in subject areas leading to a high school diploma, or secure instruction in interest areas such as art, sewing, and music have met with outstanding success in this community.

Whatever your purpose in entering Central Carolina Technical Institute may be, my personal hope is that you will be successful here and that this venture will bring you success and happiness after you have gone.

Sincerely yours,

J. F. Hockaday
J. F. Hockaday
President

SCHOOL CALENDAR 1970-1971

FALL QUARTER

Orientation & Registration	September 8-9, 1970
Classes Begin	September 10, 1970
Last Day to Register or Change Courses	September 23, 1970
Examinations	November 23-25, 1970
Fall Quarter Ends	November 25, 1970
(Thanksgiving Holidays occur between Fall & Winter Quarters)	

WINTER QUARTER

Registration	December 2, 1970
Classes Begin	December 3, 1970
Last Day to Register or Change Courses	December 16, 1970
Christmas Holidays Begin	December 21, 1970
Christmas Holidays End	January 1, 1971
Examinations	March 1-3, 1971
Winter Quarter Ends	March 3, 1971

SPRING QUARTER

Registration	March 8, 1971
Classes Begin	March 9, 1971
Last Day to Register or Change Courses	March 22, 1971
Easter Holidays Begin	April 9, 1971
Easter Holidays End	April 12, 1971
Examinations	May 24-26, 1971
Spring Quarter Ends	May 26, 1971
Graduation	May 28, 1971

SUMMER SCHOOL—FIRST SESSION

Registration	June 8, 1971
Classes Begin	July 9, 1971
Exams	July 17, 1971
First Session Ends	July 17, 1971

SUMMER SCHOOL—SECOND SESSION

Registration	July 20, 1971
Classes Begin	July 21, 1971
Exams	August 27, 1971
Second Session Ends	August 27, 1971
Graduation	August 29, 1971

SCHOOL CALENDAR 1971-1972

FALL QUARTER

Orientation & Registration	September 7-8, 1971
Classes Begin	September 9, 1971
Last Day to Register or Change Courses	September 22, 1971
Examinations	November 19-23, 1971
Fall Quarter Ends	November 24, 1971
(Thanksgiving Holidays occur between Fall & Winter Quarters)	

WINTER QUARTER

Registration	December 1, 1971
Classes Begin	December 2, 1971
Last Day to Register or Change Courses	December 15, 1971
Christmas Holidays Begin	December 22, 1971
Christmas Holidays End	January 3, 1972
Examinations	February 24, 25, & 28, 1972

SPRING QUARTER

Registration	March 2, 1972
Classes Begin	March 3, 1972
Last Day to Register or Change Courses	March 16, 1972
Easter Holidays Begin	March 31, 1972
Easter Holidays End	April 3, 1972
Examinations	May 18, 19 & 22, 1972
Spring Quarter Ends	May 22, 1972
Graduation	May 24, 1972

SUMMER SCHOOL—FIRST SESSION

Registration	June 7, 1972
Classes Begin	June 8, 1972
Exams	July 18, 1972
First Session Ends	July 18, 1972

SUMMER SCHOOL—SECOND SESSION

Registration	July 19, 1972
Classes Begin	July 25, 1972
Exams	August 28, 1972
Second Session Ends	August 28, 1972
Graduation	August 30, 1972



BOARD OF TRUSTEES

Appointed by Board of Commissioners

JAMES F. BRIDGES, Owner Deep River Used Car Lot Route 5, Sanford, N.C.	June 30, 1973
R. A. CURRIE, Agriculture Teacher Broadway High School Broadway, N.C.	June 30, 1975
MEIGS GOLDEN, Account Executive Merrill, Lynch, Pierce, Fenner & Smith, Inc. (Raleigh) McCracken Heights, Sanford, N.C.	June 30, 1977
WILLIAM B. JOYCE, President Sanford Tobacco Company Route 1, Sanford, N.C.	June 30, 1971

Appointed by City Board of Education

JOHN D. VON CANON, Vice President Sanford Furniture Company Route 4, Sanford, N.C.	June 30, 1973
HARVEY C. FAULK, Farmer Route 6, Sanford, N.C.	June 30, 1971

Appointed by County Board of Education

DOUGLAS H. WILKINSON, President Wilkinson Cadillac-Oldsmobile, Inc. Sanford, N.C.	June 30, 1975
STACY BUDD, Owner Budd's Master Tire Service Route 3, Sanford, N.C.	June 30, 1977

Appointed by Governor Dan Moore

JOHN J. MARSHALL P. O. Box 985 Sanford, N.C.	June 30, 1973
LEWIS C. LAWRENCE, Vice President Carolina Country Ham House PO Box 56, Sanford, N.C.	June 30, 1975
ROBERT E. BRICKHOUSE, Plant Superintendent Sanford Brick & Tile Company Hamilton Road, Sanford, N.C.	June 30, 1971

Appointed by Governor R. W. Scott

ROBERT W. DALRYMPLE, Farmer Route 7, Sanford, N.C.	June 30, 1977
---	----------------------

ADMINISTRATIVE STAFF

J. F. HOCKADAY	President
B.S., Atlantic Christian College, M.A., East Carolina University	
AVRON B. UPCHURCH	Director of Occupational Education
B.S., N. C. State University, M.Ed., N. C. State University	
Advanced Graduate Study in Professional Education, UNC at Chapel Hill	
SHEPHERD RICE	Director, Adult Education & Extension Programs
A.B., Ouachita University, M.Ed., UNC at Chapel Hill	
CHARLES D. MCLEOD, JR.	Assistant Director of Adult Education
A.A., Lees McRae College, B.S., East Carolina University	
ELBERT C. PRICE	Business Manager
Graduate, Kings Business College; B.S., N. C. State University, M.Ed., N. C. State University	
F. HUBERT GARNER	Director of Student Personnel
A.A., Mars Hill, B.S., Clemson University, M.S., Clemson University	
EDWIN A. BELL	Coordinator, Evening Programs
A.B., Mercer University, B.D., Andover-Newton Theological Seminary; M.A., Columbia University	

FACULTY

KENNETH W. AYSCUE	Automotive Mechanics
T. A. BAROODY	Electronics
B.S., Electrical Engineering, UNC at Chapel Hill, M.Ed., N. C. State University	
MARIAN BRIDGES	Assistant Librarian
JAMES C. BROWN	Veterinary Medical Technology
B.S.A., D.V.M., University of Georgia; M.P.H., UNC at Chapel Hill	
ROBERT BROWN	Toolmaking
Certificate in Machine Shop, Rockingham Community College	
ESTHER T. BURKE, R.N.	Practical Nurse Education
Rex Hospital	
JOSEPH CALENDINE	N. C. School of Telephony
B.A., Northeastern State College	
URNIE W. CHILES, JR.	Coordinator, Harnett Youth Center
JOHN DALRYMPLE	Business Administration
B.S., Western Carolina University	
ROBERT RAY EPLEY, JR.	Machinist—Toolmaking
Apprentice School, Newport News Shipbuilding & Dry Dock Company	
JERRY FARMER	Radio-TV Broadcasting
RONALD FAULK	Agriculture Technology
B.S., N. C. State University	
FRANK KEYS	Telephone Job Safety Training
TOMMY MANN	Field Representative—Recruitment
FLORENCE OLMSTED	Evening Librarian
DONALD W. PATTEN	Automotive Mechanics
B.S., N. C. State University, M.Ed., N. C. State University	
GLORIA H. PEELE, R.N.	Practical Nurse Education
B.S., University of N. C. School of Nursing	
PATRICIA T. PEMBERTON	Learning Laboratory Coordinator
B.S., Georgetown College	
TOM M. PEMBERTON	Industrial Maintenance
A.M.I., University of Wisconsin	
WAYNE ROBINSON	Business Administration
B.S., East Carolina University	
ROBERT W. SAWYER	Supervisor & Coordinator of Learning Laboratories
B.S., Campbell College	

LEWIS BERT SMITH	Related Subjects
B.S., East Carolina University	
NORMA M. SMITH	Librarian
A.B., UNC at Greensboro	
WILLIAM L. SMITH	Veterinary Medical Technology
B.S., Lynchburg College	
Licensed Medical Laboratory Technologist	
JERRY STEVENS	Drafting & Design
Apprentice School, Newport News Shipbuilding & Dry Dock Company	
LORACE J. THOMAS	Registrar
B.S., UNC at Greensboro, M.S., University of North Dakota	
CHARLES WADSWORTH	Welding
GUY WARRICK	Director, N. C. School of Telephony
B.I.E., N. C. State University	
PERCY W. WEST, JR.	Drafting & Design
B.S., N. C. State University	
TYRONE WILLIAMS	Mathematics
B.A., East Carolina University	
FRANCES K. WRAPE	Secretarial Science
B.S., Winthrop College	
MARY JANE YARBOROUGH	English
B.A., Campbell College, M.A., UNC at Chapel Hill	

OFFICE PERSONNEL

LIBBY T. BOGGS	Secretary, Student Personnel Office
SARAH F. EPLEY	Secretary, Extension Classes on Campus
SARA S. FREEMAN	Evening Receptionist
JACQUELYN H. PEARCE	Secretary—Receptionist
GAIL P. LUCK	Secretary—President
HELEN M. MASON	Secretary—N. C. School of Telephony
RUTH W. TROGDON	Bookkeeper
MATTALENE P. WICKER	Secretary—Curriculum Classes & Faculty
JUDY C. WILLIAMS	Secretary—ABE and Extension Classes Off Campus

MAINTENANCE AND CUSTODIAL STAFF

R. F. SUDDARTH	Supervisor
CHARLES CHALMERS	Janitor
HENRY SMITH	Janitor

STUDENT SUPPLY STORE

NORMAN C. CALCUTT	Store Manager
-------------------	---------------

THE INSTITUTE

The Central Carolina Technical Institute is a tax supported, public non-profit school under the control of a local Board of Trustees. It was established under provisions of the General Statutes of North Carolina, Chapter 115-A, passed by the Legislature in 1963. It is supervised by the Department of Community Colleges, North Carolina State Board of Education. Members of the faculty are specially trained, qualified instructors with many years of experience in their chosen craft or profession. Each member of the administrative and teaching staff meets the standards of the Department of Community Colleges. Although established primarily for North Carolina residents, the Institute accepts students from other states.

The institution originated as Lee County Industrial Education Center and held its first classes on September 17, 1961. On October 2, 1965, the State Board of Education and the Advisory Budget Commission authorized elevation to technical institute status with authority to award Associate of Applied Science Degrees.

Central Carolina Technical Institute is a member of the American Association of Junior Colleges. The American Veterinary Medical Association and the American Animal Hospital Association recommends the Veterinary Medical Technology program to prospective students.

Over 65,000 square feet of classroom, shop, and laboratory space is located on a twenty-six acre site on Kelly Drive off Nash Street near U.S. Highway #421 (east), Sanford, North Carolina. Ample equipment, a large library, and an efficient staff provide optimum training in a variety of adult programs in technical-vocational, general, and community service fields.

The Institute is open Monday through Thursday from 8:00 a.m. to 10:00 p.m. and Friday from 8:00 a.m. to 5:00 p.m., exclusive of holidays. Full-time administrative staffs are available at both the day and evening schools.

Classes are operated at the Institute and in outlying areas. In general, curriculum courses are held at the Institute proper; upgrading and general adult courses are held both at the Institute and at other locations.

PURPOSE OF THE INSTITUTE

The purposes of Central Carolina Technical Institute are:

1. To prepare young men and women to meet specific job requirements for initial employment.
2. To provide vocational or technical education for employed men or women who wish to advance in their jobs.
3. To provide the education necessary to meet high school equivalency requirements for those who did not complete high school in the public school system.
4. To enable our citizens to acquire knowledge and skills which contribute to social, economic, and cultural growth.

WHAT TECHNICIANS AND CRAFTSMEN DO

Technicians work on a team with engineers, scientists, supervisors, and skilled craftsmen, converting theories and ideas into products and processes. The technician is the pivot-man on this team. The vocational craftsman actually provides the skilled manpower for the job.

Technicians participate in research and development. They assist in designing and perfecting machines, processes, materials, and services for our increasingly complex world of work. They consider why things work as well as how things work. They work with their minds as well as with their hands. Technician jobs frequently require the ability to apply scientific principles and to solve design, process, or service problems. Other technical jobs demand extensive knowledge of laboratory equipment, procedures, and techniques. The craftsmen manipulate machines and tools to bring the job to completion.

WOULD YOU LIKE THIS WORK?

Your school interests and the things you like to do outside the classroom should help you decide whether you want to be a technician. Are you interested in electronics? Did you ever take machinery apart to find out how it worked? Have you enjoyed the practical activities of your science laboratory and shop courses? Did you have aptitude in mathematics and problem-solving? Does the space age hold fascination for you? If your answers are basically "yes," you may enjoy working as a technician or trained craftsman.

YOUR OPPORTUNITIES

Technician jobs are increasing at a faster rate than any other occupational group—a 50 percent increase is expected within 5 years. More than 100,000 technicians will be needed each year; schools now graduate only 25,000 per year. It is expected that our increasingly complex technology will require craftsmen with higher levels of skills.

A technician's earnings depend upon his education, his technical specialty, and his work experience. Starting salaries for the majority of post-high school technical graduates in 1970 ranged from \$4800 to \$8200 per year. Most technicians can look forward to a significant increase in earnings as they gain experience.

ADMISSION PROCEDURES

Central Carolina Technical Institute, as a technical, state-supported institution, adheres to an "Open Door" admissions policy for all applicants who are high school graduates or are school leavers 18 years old or older. Placement in specific curriculums will be determined by test results and conferences between student and school officials.

Applicants are encouraged to complete admission procedures as early as possible. Applications will be accepted from high school students during the senior year; others may apply at any time pre-

ceding enrollment. Early application is important as enrollment in some classes may be limited.

Applications will be processed when the following steps have been completed.

1. Complete and return application to Central Carolina Technical Institute. Application forms may be obtained from your high school guidance counselor or Student Personnel Office at Central Carolina Technical Institute.
2. Request your principal or guidance counselor to submit a transcript of your high school record to the Registrar at Central Carolina Technical Institute.
3. Request the Registrar to forward a transcript of your record to the Institute if you have attended any post-secondary institution (vocational school, technical school), college or university.
4. Ask the persons whom you have named on your application blank as personal references to complete the reference forms. Be certain that your name and the curriculum for which you are applying are on the reference forms. Ask the persons to return the completed forms to CCTI.
5. If you will be at home while attending classes at CCTI, complete *only* the front of the medical form and return it to CCTI. Have the medical form completed by your physician and mail to Central Carolina Technical Institute if you will *not* be living at home while attending school.
6. Take the two-hour series of placement tests given at the Institute. Tests are given each Monday night at 7:00 P.M. in the Student Personnel Office or between 8:00 A.M. and 2:00 P.M. during the school day. Students who live more than 50 miles from the school will be accepted on the basis of their high school transcript and will take the placement tests during the week of Orientation and Registration.
7. A pre-admissions counseling session with an official from the Student Personnel Office will be held prior to acceptance. If a student's success in a particular curriculum seems doubtful because of previous scholastic background and/or test scores, he may be asked to enter the Learning Lab or the Development Studies Program preceding enrollment.
8. After completion of the above steps, the student will be notified as to probable admission. Upon acceptance, the student must submit a \$15 deposit fee to the Business Office at the Institute. This deposit will pay the activity fee and will reserve a place in the student's chosen curriculum. It will not be returned unless the program fails to materialize.
9. *VA students.* Contact your local Veterans Administration Office to process your paper work so that you may receive the appropriate benefits under the G.I. Bill.
10. *FINANCIAL AID.* Forms may be obtained by writing or calling the Student Personnel Office. An individual will be considered for financial aid only after he has been accepted.

EXPENSES

Tuition Fees

Each student enrolled full-time or part-time in credit courses shall be charged tuition at the rate of \$2.50 per quarter credit-hour; provided, the maximum charge shall not exceed \$32 for any quarter. Tuition for out-of-state students shall be 2½ times the in-state rate.

Instructional fees are due prior to entering the student's first scheduled class. Students enrolled in noncredit courses are charged fees to cover instructional materials. These fees vary with the nature of the course.

Activity Fee

A fee of \$15 per year will be charged each regular curriculum student who will be enrolled in at least 7 credit hours of classes. This fee is for student activities and includes the cost of an annual, pictures, the student newspaper, parking sticker, dances, social events, and other activities. Those students taking less than 7 credit hours of classes will not be required to pay an activity fee but would be required to pay for an annual or other services included in the activity fee should they desire to participate.

For purposes of calculating the activity fee, the school year begins with the fall quarter in September. The full fee of \$15.00 for the year is due at registration. Those students who enroll the first time in the winter quarter will be required to pay a \$10.00 activity fee and those enrolling for the first time in the spring quarter will be required to pay a \$5.00 activity fee. No activity fee will be charged those enrolling the first time in the summer quarter. Those registering later than the fall quarter and paying a reduced activity fee will not receive an annual as a part of the fee, but may purchase an annual if they desire.

The \$15.00 advance deposit for fall quarter registration actually pays the activity fee for the year. Activity fees are not refundable unless the course fails to materialize.

Late Registration Fee

A late registration fee of \$3.00 will be charged all students who register after classes begin.

Breakage Fee

Breakage, damage, or loss due to negligence, carelessness, or other mishandling of school supplies, materials, or equipment by students is the responsibility of such students. They will be required to pay for such items and may be subject to disciplinary action.

Graduation Fee

A graduation fee is determined for each graduation. It will be approximately \$7.00 for those graduating in the spring and \$3.00 for those graduating in the summer.

Refund Policy—Tuition

Tuition refund for students shall not be made unless the student is, in the judgment of the institution, compelled to withdraw for unavoidable reasons. In such cases, two-thirds ($\frac{2}{3}$) of the student's tuition may be refunded if the student withdraws within ten (10) calendar days after the first day of classes. Tuition refunds will not be considered after that time. Tuition refunds will not be considered for \$5.00 or less, except if a course fails to materialize. In cases where courses or curricula fail to materialize, all of the student's tuition shall be refunded.

Textbooks

Students are required to purchase their textbooks. The Institute operates a bookstore from which books and other required materials and equipment may be purchased. The cost of these items varies with the program of instruction.

Student Insurance

Certain risks are inherent in any work involving regular contact with mechanical and electrical equipment. While stringent precautions will be taken to insure safety, it is felt to be in the best interest of all students to provide some measure of insurance protection.

A group policy providing the desired insurance protection will be maintained in effect by the Institute and all students will be urged to subscribe to such coverage. The cost of accident insurance to the student will be \$3.00 per year.

Business Office

Payments of fees; sale of books, supplies, and materials; receipt of loans; and payment of refunds are major responsibilities of the business office. Students may avail themselves of these business facilities between 8:00 a.m. and 4:30 p.m. daily, Monday through Friday, excluding holidays.

FINANCIAL ASSISTANCE

Central Carolina Technical Institute provides a limited amount of financial aid to students who need assistance to meet financial requirements. Awards are made on a first-come basis as long as funds are available. Students, therefore, are urged to apply early. No award is made until a student is officially accepted. The financial aid committee is composed of: Director of Student Personnel, Business Manager, one teacher appointed by the Director of Occupational Education, and one student appointed by the Student Government Association.

A. THE TYPES OF AID (OVER WHICH THE INSTITUTE HAS CONTROL) FOR WHICH THERE IS NO REPAYMENT INCLUDE:

1. *College Work Study*—Part-time jobs available to students who

qualify. These may be on or off the campus. Students are paid from Federal Funds with a matching share from local funds.

2. *Educational Opportunity Grant*—Money made available from the Department of Health, Education, and Welfare to assist students of exceptional financial need to enter and remain in Central Carolina Technical Institute. Grants are usually “packaged” with other types of aid, scholarships, or Work Study.
3. *Trustees Scholarship*—One hundred and twenty dollars (120.00) awarded to deserving student(s) to help offset the cost of tuition, books, and fees.
4. *First Citizens Bank Scholarship*—Two hundred dollars (\$200.00) is awarded to one or more students who are in need to complete their education at Central Carolina Technical Institute.
5. *Lee County Medical Auxiliary Scholarship*—Restricted to Practical Nurse Education students from Lee County who may need help for tuition or books.
6. *M.D.T.A. Funds*—Available to students from low income families. This is an Employment Security Commission cooperative agreement. The student is paid a small salary, plus tuition, books, etc.

B. TYPES OF LOAN FUNDS (AVAILABLE THROUGH THE INSTITUTE) WITH SPECIFIC REPAYMENT PROVISIONS.

1. Through the *College Foundation, Inc.*, Raleigh, N. C., a sum not to exceed \$1,500 per year. Repayment—to begin within 9 months after leaving school. Present rate of interest is 7%.
2. *Seymore Loan Fund*—From the Lee County Cancer Society, a sum not to exceed \$200.00 per year and restricted to Practical Nurse Education students. Repayment—to begin within 90 days after leaving school and to be completed within 24 months. Present rate of interest is 6%.

C. OTHER SOURCES OF AID TO STUDENTS PLANNING TO ATTEND CENTRAL CAROLINA TECHNICAL INSTITUTE. APPLICATIONS FOR THESE SHOULD BE MADE THROUGH YOUR HIGH SCHOOL COUNSELOR.

1. *Sanford Lions Club*—Two \$150.00 scholarships.
2. *Sanford Woman's Club*—\$100.00 scholarship.

D. PROVISION FOR AWARDS

Beginning in July and proceeding through September of the school year, the financial aid committee will meet once each month or more often if necessary to make awards. Students who encounter financial difficulty after school has started should inform the Financial Aid Officer as soon as possible in order that some arrangements can be made.

E. MISCELLANEOUS

P.A.C.E., which is a cooperative agreement with the State Department of Social Services, is a plan whereby low income students are assisted in finding jobs while in school to help offset college expenses.

From time to time various firms, individuals and organizations, such as P.T.A., United Fund, make available funds to be used for student aid.

F. REQUESTS FOR AID

All requests for student aid should be sent to:
Financial Aid Officer
Central Carolina Technical Institute
Route 2, Box 55
Sanford, North Carolina 27330

ACADEMIC INFORMATION

Grading System

The Central Carolina Technical Institute operates on a required-subject quality point system in the curriculum areas, with the provision that all subjects must be completed with satisfactory grades if the student is to be awarded a certificate of completion or diploma. The grading system set forth below is followed for all subjects in curriculum areas. Some Extension, Fundamentals Learning Laboratory, and Adult Education Programs are not graded except as to "completed" or "not completed"; others follow the curriculum grading system.

<i>Letter Grade</i>	<i>Meaning</i>	<i>Quality Points Per Credit Hour</i>
A	Excellent	4
B	Good	3
C	Average	2
D	Marginal	1
F	Failure	0
P (Grade)	Passed by proficiency test or Re-examination	
I	Incomplete*	
WP	Withdrew Passing	
WF	Withdrew Failing	

* Incomplete due to no fault of the student; i.e., sick at examination time, deficient in outside work with valid excuse. This grade must be eliminated by the end of the following quarter or it becomes F.

Removal of Failing Grade

Any student who fails a course within two quarters of graduation and who fails only one course during that quarter may apply to the Director of Student Personnel for permission to remove that failure by standing for re-examination on the total subject matter of the course.

Academic Standards

Every student must pass all prerequisite courses before advanced courses may be undertaken.

A student is scholastically eligible for graduation when he has completed all required courses in the respective curriculum with an overall average of 1.75. The student must also have a 2.0 average in his major area.

Graduates will be awarded appropriate evidence of completion in all areas.

Transfer Credit

Transfer credit from other institutions within the Department of Community Colleges will be accepted, provided the course has been passed with a grade of "C" or better and provided such course is required by Central Carolina Technical Institute for graduation.

Other transfer credit and credit from proficiency examinations will be accepted, not to exceed 50% of the required and elective subjects, provided that the source and nature of such credit is approved by the Director of Student Personnel and the Director of Occupational Education. Consideration will be given for previous educational and work experience and evaluation of this experience will be made to determine if the student is to be exempt from certain courses at Central Carolina Technical Institute. Credit will be given in the event that the student meets the stated requirements. Appropriate instruments of evaluation will be given to determine if the student is proficient in a given area.

Prerequisites

The student must meet the prerequisite requirement or be accepted into the course by the major area instructor or department head.

Honor Students and Honor Graduates

A student will be announced as an honor student if he is enrolled in a full-time curriculum and receives a 3.0 G.P.A. or higher during a school quarter. Students graduating with an average of 3.0 or higher will be announced as honor graduates.

Reports

Report cards will be mailed at the close of each quarter to students 21 years of age or older and to parents or guardians of students under 21 years of age.

Re-admittance

When a student withdraws because of illness or financial reasons, he may re-enter at the beginning of a quarter which offers courses for which he is eligible.

Attendance

Students are expected to attend all scheduled classes for which they are registered. Although special circumstances may cause a

student to be absent, regular attendance is essential to satisfy regular course objectives.

All absences will be evaluated by the instructor of the class which the student has missed. Individual instructors will determine whether absences are excused or unexcused.

Students who anticipate an absence should contact their instructor before the class meets. Should this prior notice to the instructor be impossible, the student should expect to explain his absence upon his return to class.

All work missed during absences must be made up. Failure to make up work which is missed will adversely affect the student's final grade for the course. To receive credit for a course, a student should attend 80% of class and 80% of lab hours.

Punctuality

Students are expected to be in their seats and ready for instruction at the sounding of the bell announcing the class. Deficiencies in this area will not be tolerated. Excessive tardiness will be dealt with in a manner similar to that for absences.

Withdrawals

A student who wishes to withdraw from school during the academic year should complete a withdrawal form through the Student Personnel Office. This will protect the student's scholastic records and his rights to re-enroll and transfer credits.

CONDUCT AND STANDARDS

The Central Carolina Technical Institute has a genuine concern for the integrity of all students enrolled. Students are required to conduct themselves in a mature and responsible manner.

The following rules apply to all students who are enrolled in this institution:

1. Each student is held responsible for information published through notices and announcements placed on bulletin boards.
2. Students who negligently lose, damage, destroy, sell, or otherwise dispose of school property placed in their possession or entrusted to them will be charged for the full extent of the damage or loss and are subject to disciplinary action.
3. Under no conditions will alcoholic beverages or liquors be permitted in or on the school property. No one under the influence of alcohol or narcotics will be allowed on school premises. Any violation of this regulation will result in expulsion from the Institute on the first offense.
4. Students who engage in such acts as stealing, gambling, profane language, personal combat, and possession of firearms and dangerous weapons are liable to disciplinary action.
5. Smoking is prohibited in all classrooms, laboratories and shops *at all times*. Smoking is permitted in the student lounge, outside the building, and in the halls.

6. "Cleanliness is the sign of intelligence." Students are expected to make use of the disposal containers in the halls and in shops and classrooms at all times.
7. Students are expected to dress appropriately for the occasion.
8. Students are asked not to bring children to class with them.
9. Students will remember that when entering and leaving the school parking areas they must always proceed with caution. Never exceed 10 M.P.H.
10. Drinking of soft drinks, milk shakes and coffee, eating of food, is allowed only in designated areas. Drinks and food should be kept within the limits.
11. Vehicles for transportation to and from the Institute will park only in designated areas. Vehicles will be operated safely, moderately, and courteously. The speed limit on the campus is 10 M.P.H. Vehicles will be registered with the Business Office at the first occasion they are used on campus grounds.

STUDENT ACTIVITIES AND SERVICES

The Central Carolina Technical Institute makes every effort to surround the student with activities and services conducive to intellectual growth. In return, the student is expected to conform with established policies and devote his efforts to his personal improvement and the good of the institution. The following is a brief statement of the activities and services available to the student.

Student Council

Legislative, executive, and judicial authority, insofar as student affairs are concerned, is the responsibility of the student council. The student council members are elected in school-wide elections by each curriculum class. The student council works under the supervision of the Institute administration and serves as the organ of the students in their relations with the officials of the Institute. Elections are usually held the first week in October.

Newspaper

Teck Talk News is published by the student council and is available to the student body through the Student Personnel Office. The cost of the newspaper is included in the student activity fee and is free of additional expense to the students.

Annual

The *Cencaro* is published by the annual staff made up of students, and is available to all students. The cost of the *Cencaro* is included in the activity fee of \$15.00.

Rings

Rings are usually ordered in the fall quarter by students scheduled for graduation the following spring or summer. Cost of the rings

vary, depending on the weight and other factors. The average cost is \$25.00 to \$40.00. A deposit of \$10.00 is collected when rings are ordered. This is *not* included in the activity fee.

Special Events

Occasionally the Student Council may sponsor other activities such as dances, socials, films, speakers and related activities that will be educationally and culturally uplifting to the students. When such occasions arise, students are notified in advance and encouraged to participate. The major cost of these activities is included in the activity fee.

The Student Lounge

The Institute operates a student lounge which provides service for soft drinks, coffee, sandwiches, candy, and cigarettes; a pay telephone for personal telephone service; and tables and benches for eating and relaxing during vacant periods during the school day.

STUDENT PERSONNEL SERVICES

The purpose of the Student Personnel Office is to test, counsel, place, maintain records for, assist in housing, arrange loan funds, and assist the student in securing self-help and job placement.

Students are encouraged to consult the personnel office on personal and academic matters. The office will arrange conferences to discuss problems with the student in order to evaluate his case and provide the needed guidance.

The Student Personnel Office is responsible for the following areas:

Testing: Various tests are given as a tool for use in guidance and placement of students.

Counseling: Each student may use this service as desired. He may feel free to come to the personnel office at any time when a personal problem arises which may affect his educational progress.

Placement: The Institute will assist the students and alumni in securing employment. The objective of this service is to guide and assist the student and graduate in obtaining the type of position for which he is best qualified.

Active contacts are maintained throughout North Carolina with industries. Informative booklets, brochures, and industrial directories are available in the library. Group and individual job interviews will be arranged.

Records: Transcripts of the students' courses and grades are maintained and will be sent to agencies or institutions upon written request of the student.

Draft Deferment: Draft deferment forms are mailed to the local Selective Service Board upon request of the student. A student is deferred under the same draft-deferment regulations as are other college students through-out the State and nation. It is the responsibility of the student to sign the deferment request.

Student Housing: The Institute does not operate dormitory facilities nor does it assume responsibility for housing and maintenance.

nance. It will assist students in securing adequate facilities in Sanford and vicinity, subject to availability of housing and approval of the student concerned. Payment for such facilities is the direct responsibility of the student and must be made direct to the landlord. The Institute cannot accept responsibility for student conduct or activities off the school premises except when in connection with school sponsored and supervised activities.

Vocational Rehabilitation

The Institute works with various vocational rehabilitation agencies in seeking to provide educational opportunities for persons with physical and health limitations.

Veterans

Qualified veterans and wives and children of deceased veterans may be admitted and approved to receive educational benefits, providing they meet requirements established by the Veterans Administration. Central Carolina Technical Institute has been approved by the Veterans Administration. Veterans eligible to attend technical or vocational programs may do so under the Veterans' Readjustment Benefits Act of 1966.

In cases where the minimum number of clock hours per quarter do not meet the requirements established by the Veterans Administration, Public Law 89-358, (25 hours technical, 30 hours vocational) the institution will provide classes for such veterans to meet this requirement by scheduling additional hours in subjects shown in the curriculum.

The Institute is approved for the training of veterans under Public Law 16 of the 78th Congress and under Public Law 550 of the 82nd Congress, and Chapter 34, Title 38, United States Code. Hours for the Student Personnel Office are: 8-12 & 1-5 Monday through Friday and 7-9:30 p.m. on Monday.

LEARNING RESOURCE CENTER

Library Services

The Institute completed and occupied a new facility named a Learning Resource Center in the spring of 1970. The facility encompasses the library and Learning Laboratory. It is an essential part of the educational processes for the Institute and is committed to independent learning and self-study. Information is dispensed in all forms of educational media including books, pamphlets, magazines, newspapers, tapes, film, slides, and television. An innovation called a Dial Retrieval System makes available by tape replay class lectures and a variety of prepared materials to supplement the student's learning experiences. Individual study carrels are provided for using the Dial Retrieval System and for self-study. In addition to the regular library and Learning Laboratory areas, the Center provides an audio-visual lecture room, preview and listening rooms, and browsing areas.

The Center is open to the general public as well as regular students at CCTI.

G.E.D.

As part of its continuing public service, C.C.T.I. has been designated as an official GED center. The tests known as the Test of General Educational Development are designed to measure a person's knowledge and skill in five areas. Test one measures ability to use correct and effective English in written expression. Tests two, three, and four measure ability to read, understand, and interpret material in social studies, natural sciences, and literature, respectively. Test five measures the ability to solve problems in mathematics.

Upon successful completion of the 10 hour battery of tests, the student will receive the Equivalency Certificate issued by the North Carolina State Board of Education. The certificate is recognized almost without exception by industry, Governmental agencies, employers, and colleges as the legal equivalent of a diploma from an accredited high school. The certificate means that the holder has achieved a level of general educational development comparable to that of high school graduates.

Any person who is not a high school graduate may apply for the certificate and take the test if he is (1) 19 years of age or older; however, an applicant 18 years of age may apply for the test provided he has been out of a regular high school program for at least six months; (2) he is a resident of the state, and (3) he has a definite vocational or educational purpose.

Appointments must be made to take the tests which are administered at CCTI every Tuesday. Persons desiring application forms or further information are requested to contact the Student Personnel Office.

GUIDED STUDIES

The Guided Studies program provides an opportunity for inadequately prepared students to obtain special help in overcoming academic deficiencies that are likely to lead to academic failure in ones chosen curriculum. Guided Studies combines regular classroom teaching with programmed instruction, special small group and individual instruction. An instructor who is knowledgeable in Guided Studies will assist the student and his teachers in analyzing the student's problem, then design a program of direct assistance to the student in an effort to keep him in school and learning.

Special summer courses can and will be set up to meet a student's deficiencies prior to enrolling in a curriculum.



AGRICULTURAL BUSINESS AND RESEARCH TECHNOLOGY

Purpose of Curriculum

The Agricultural Business and Research Technology curriculum will prepare students for entry into the extremely important and rapidly growing field of agricultural research and agricultural business—involving the development, testing, production, use and sale of pesticides, chemicals, biologicals, seed, animals, etc. The scope of activity within this field is practically unlimited.

This curriculum will give the student a functional understanding of:

1. Effective communication and human relations situations peculiar to the area of agricultural business and research.
2. Basic biological sciences relating to agricultural research and business.
3. Controlled production of agronomic, horticultural crops, and animals.
4. Research techniques as applied to agriculture.

Job Description

Agricultural business and research is a dominant factor in the continued development of the agricultural industry in North Carolina. The trend towards larger farming operations, greater automation, and the development of new products, materials, methods, and equipment will make skilled technicians trained in this curriculum a necessity for successful agricultural development.

Graduates of this curriculum will qualify for positions with state, federal, industrial and private research stations. Fertilizer, seed, chemical companies and sales and service organizations such as Farmers Exchanges are anxious to employ this type of technician.

AGRICULTURAL BUSINESS AND RESEARCH TECHNOLOGY

Course Title	Hrs. Pr. Wk.		Qr.
	Cl.	Lab.	Hrs. Cr.
First Quarter			
T-ENG 101 Grammar	3	0	3
T-BIO 105 Biology	3	6	6
T-MAT 110 Business Mathematics	5	0	5
T-AGR 218 Agricultural Mechanization	3	4	5
	14	10	19
Second Quarter			
T-ENG 102 Grammar	3	0	3
T-BUS 120A Accounting	3	4	5
T-CHM 101 Chemistry	3	6	6
T-AGR 185 Soils and Fertilizers	3	4	5
	12	14	19
Third Quarter			
T-AGR 201 Agricultural Chemicals	3	6	6
T-PSY 206 Applied Psychology	3	0	3
T-ECO 102 Economics	3	0	3
T-AGR 271 Field Crops	3	4	5
	12	10	17
Fourth Quarter			
T-BUS 232 Salesmanship	2	2	3
T-MAT 214 Agricultural Statistics	3	4	5
T-AGR 145 Entomology	2	4	4
T-ENG 204 Oral Communication	3	0	3
T-AGR 180 General Poultry	3	2	4
	13	12	19
Fifth Quarter			
T-HOR 150 General Horticulture	2	4	4
T-AGR 127 Nutrition	3	2	4
T-BUS 115 Business Law	3	0	3
T-BUS 110 Office Machines	2	2	3
T-AGR 155 Plant Pathology	2	4	4
	12	12	18
Sixth Quarter			
T-ENG 103 Report Writing	3	0	3
T-AGR 228 Livestock Diseases and Parasites	3	2	4
T-AGR 279 Forestry	3	4	5
T-BUS 239 Marketing	5	0	5
T-AGR 299 Research Problems	2	4	4
	16	10	21



AUTOMOTIVE MECHANICS

Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair, or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, buses, and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year. One complete quarter is devoted to diesel engines and fuel systems which broadens job opportunity.

Job Description

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

AUTOMOTIVE MECHANICS

Course Title	Hrs. Cl.	Pr. Shop	Wk. Cr. Hrs.
First Quarter			
AUT 1101A Basic Hand Tools	1	2	1
AUT 1101B Lubrication	1	2	2
AUT 1101C Standard and Disc Brakes	2	7	4
MAT 1101 Fundamentals of Mathematics	5	0	5
ENG 1101 Reading Improvement	3	0	3
PHY 1101 Applied Science	3	2	4
	15	13	19
Second Quarter			
AUT 1102A Engine Electrical Systems	2	6	4
AUT 1102B Engine Fuel Systems	2	5	3
ENG 1102 Communicative Skills	3	0	3
PHY 1102 Applied Physics	3	2	4
DFT 1101 Automotive Schematics and Diagrams	1	3	2
	11	16	16
Third Quarter			
AUT 1103 Steering and Suspension Systems	2	6	4
AUT 1104 Front End Alignment & Wheel Balancing ..	2	6	4
MEC 1112 Machine Shop	2	4	3
DFT 1121 Drafting—Trade I	0	6	2
	6	22	13
Fourth Quarter			
AUT 1105 Internal Combustion Engines	2	6	4
AUT 1106 Automotive Tune-Up	2	6	4
WLD 1101A Welding	2	4	3
PME 1126 Small Engine Repair	2	4	3
	8	20	14
Fifth Quarter			
PME 1103 Diesel Engine Servicing	2	9	5
PME 1106 Diesel Fuel System	2	7	4
MEC 1139 Basic Hydraulics	2	6	4
	6	22	13
Sixth Quarter			
AUT 1107 Automotive Power Trains	2	6	4
AUT 1108 Automatic Transmissions	3	9	6
AUT 1110 Electronic Charging and Ignition Systems ..	1	3	2
AUT 1112 Power Accessories	1	3	2
	7	21	14
Seventh Quarter			
AUT 1109 Troubleshooting Automotive Systems	2	9	5
AHR 1101 Automotive Air-Conditioning	2	6	4
SPA 1298 Special Problems	0	6	2
BUS 1103 Small Business Operation	3	0	3
	7	21	14





BUSINESS ADMINISTRATION

Purpose of Curriculum

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.
3. Knowledge in specific elements of accounting, finance, and business law.
4. Understanding and skill in effective communication for business.
5. Knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

Job Description

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various machines, and assisting managers in

supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.

BUSINESS ADMINISTRATION

Course Title	Hrs. Pr. Wk.		Qr.
	Cl.	Lab.	Hrs. Cr.
First Quarter			
T-ENG 101 Grammar	3	0	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	3	2	4
T-BUS 102 Typing	2	3	3
T-SOC 102 Principles of Sociology	3	0	3
	16	5	18
Second Quarter			
T-ENG 102 Composition	3	0	3
T-BUS 120 Accounting I	5	6	8
T-BUS 115 Business Law	3	0	3
T-ECO 102 Economics	3	0	3
T-EDP 104 Introduction to Data Processing	2	2	3
	16	8	20
Third Quarter			
T-PSY 206 Applied Psychology	3	0	3
T-BUS 121 Accounting II	5	6	8
T-BUS 116 Business Law	3	0	3
T-BUS 243 Advertising	3	2	4
T-ECO 104 Economics	3	0	3
	17	8	21
Fourth Quarter			
T-ENG 204 Oral Communications	3	0	3
T-BUS 232 Salesmanship I	2	2	3
T-BUS 235 Business Management	3	0	3
T-BUS 222 Accounting III	3	6	6
T-BUS 123 Business and Managerial Finance	2	2	3
	13	10	18
Fifth Quarter			
T-ENG 206 Business Communications	3	0	3
T-BUS 233 Salesmanship II	3	2	4
T-BUS 110 Office Machines	2	2	3
T-BUS 225 Cost Accounting	3	4	5
T-BUS 124 Business and Managerial Finance	2	2	3
	13	10	18
Sixth Quarter			
T-ENG 103 Report Writing	3	0	3
T-BUS 229 Taxes	3	4	5
T-BUS 245 Retailing	3	0	3
T-BUS 271 Office Management	3	2	4
T-BUS 239 Marketing	5	0	5
	17	6	20



BUSINESS ADMINISTRATION ACCOUNTING OPTION

Purpose of Curriculum

Accounting is one of the fastest growing employment fields in America today, and the job outlook for good accountants seems bright for many years to come. These opportunities are the result of the tremendous business and industrial expansion in all parts of the country. Because of this emphasis, there is a growing need for trained people in the area of accounting to help managers keep track of a firm's operation. The Accounting Curriculum is designed to fill this need by offering students the necessary accounting theories and skills for entry into the accounting profession.

The duties and responsibilities of an accountant vary somewhat in different firms. Some of the things an accountant might do are: record transactions, render periodic reports, maintain cost records, make special reports, complete tax returns, audit the books, and advise management in areas of financial affairs.

Job Description

The graduate of the Accounting Curriculum may qualify for various jobs in business and industry leading to any of the following accounting positions: accounting clerk, payroll clerk, accounting machine operator, auditor, and cost accountant. This training plus further experience should prepared them to become office managers, accounting supervisors, and to fill other responsible positions in a business firm.

**BUSINESS ADMINISTRATION
ACCOUNTING OPTION**

Course Title		Hrs. Pr. Wk.		Qr. Hrs. Cr.
		Cl.	Lab.	
First Quarter				
T-ENG 101	Grammar	3	0	3
T-MAT 110	Business Mathematics	5	0	5
T-BUS 101	Introduction to Business	3	2	4
T-BUS 102	Typing	2	3	3
T-SOC 102	Principles of Sociology	3	0	3
		16	5	18
Second Quarter				
T-ENG 102	Composition	3	0	3
T-BUS 120	Accounting I	5	6	8
T-BUS 115	Business Law	3	0	3
T-ECO 102	Economics	3	0	3
T-EDP 104	Introduction to Data Processing	2	2	3
		16	8	20
Third Quarter				
T-PSY 206	Applied Psychology	3	0	3
T-BUS 121	Accounting II	5	6	8
T-BUS 116	Business Law	3	0	3
T-ECO 104	Economics	3	0	3
T-BUS 239	Marketing	5	0	5
		19	6	22
Fourth Quarter				
T-ENG 204	Oral Communications	3	0	3
T-BUS 235	Business Management	3	0	3
T-BUS 222	Accounting III	3	6	6
T-BUS 123	Business and Management Finance	2	2	3
T-BUS 247	Business Insurance	3	0	3
		14	8	18
Fifth Quarter				
T-ENG 206	Business Communications	3	0	3
T-BUS 110	Office Machines	2	2	3
T-BUS 124	Business and Management Finance	2	2	2
T-BUS 225	Cost Accounting	3	4	5
T-BUS 224	Intermediate Accounting	5	2	6
		15	10	19
Sixth Quarter				
T-ENG 103	Report Writing	3	0	3
T-BUS 229	Taxes	3	4	5
T-BUS 245	Retailing	3	0	3
T-BUS 271	Office Management	3	2	4
T-BUS 269	Auditing	4	2	5
		16	8	20



CAMPBELL COLLEGE TRANSFER AND/OR GENERAL EDUCATION

Purpose of Curriculum

The General Education Curriculum has two main purposes. One is to provide the student with two years of general education and interest type course work culminating in an Associate Degree in General Education. The second purpose is to provide the student with the freshman level of course work that will be transferable to any accredited college or university which accepts transfer credit from Campbell College.

The second purpose is achieved through a contractual agreement between Campbell College and Central Carolina Technical Institute, Sanford, North Carolina. Through this agreement, Campbell College will provide the instructional services for 42 semester hours of course work on the campus of Central Carolina Technical Institute. These 42 hours of work will normally be completed during the first year in the program by a fulltime student. When the student has successfully completed all or part of these 42 hours of course work, application may be made to Campbell College or another accredited college or university that will accept these credits for transfer.

The student who is not interested in transferring to a college or university after the first year, may elect to continue work at Central Carolina Technical Institute and work towards the Associate Degree in General Education. It is suggested that the student indicate at enrollment which option he or she plans to pursue at Central Carolina Technical Institute—the college transfer option or the general education degree. If the college transfer option is selected, the student should also select as near as possible the degree to be pursued after transfer.

Entrance Requirements

In order to enter the General Education Curriculum, whether trans-

fer to a college or university is intended or not, the student must be a high school graduate or its equivalent.

The Curriculum

The first 42 semester hours of the curriculum provide a basic core of general education work. This is the college transfer portion of the curriculum. The fifth and sixth quarters of course work are designed so the students can build on this basic core of general education and also so the students can take specialty courses based on the interests of the individual student. For these electives, the student may choose courses from any of the technical curriculums they desire. The instructional program at Central Carolina Technical Institute will provide for the student a wide selection of offerings in such diverse fields as business, agriculture, drafting, electronics, and others.

The entire two-year General Education Curriculum will require a minimum of 105 quarter hours of general education and interest type courses of which 63 hours are considered to be college transferable.

Semester-quarter conversion will be explained to all persons.

GENERAL EDUCATION CURRICULUM

Course Title	Hrs.	Pr. Wk.	Sem.
	Cl.	Lab.	Hrs. Cr.
First Semester			
*HIS 111E Western Civilization	3	0	3
*ENG 111E Composition	3	0	3
*MAT 111E College Algebra	3	0	3
*GEL 111E Physical Geology	3	2	4
*HEA 111E Health	2	0	2
	14	2	15
Second Semester			
*HIS 112E Western Composition	3	0	3
*ENG 112E Composition	3	0	3
*MAT 112E Elementary Functions	3	0	3
*GEL 112E Historical Geology	3	2	4
*MUS 131E Music Appreciation	3	0	3
	15	2	16
Third Semester—(First Session)			
*HIS 221E American History	3	0	3
*ENG 221E Major English Writers	3	0	3
	6	0	6
(Second Session)			
*BIO 111E Biology	3	2	4
*PED 111E Physical Education	0	2	1
*PED 112E Physical Education	0	2	1
	14	2	15

* Indicates the college credit courses that will be offered by Campbell College on the campus of Central Carolina Technical Institute.

			Hrs. Pr. Wk.	Qr.
			Cl.	Hrs. Cr.
Fifth Quarter				
T-CHM 101	General Chemistry		3	6
T-BUS 115	Business Law		3	0
T-ECO 102	Economics		3	0
T-BUS 110	Office Machines		2	2
T-BUS 102	Typing		2	3
			13	11
Sixth Quarter				
T-BUS 116	Business Law		3	0
T-ENG 204	Oral Communications		3	0
T-PSY 206	Applied Psychology		3	0
T-BUS 239	Marketing		5	0
T-BUS 243	Advertising		3	2
			17	2

Any technical course may be substituted for the ones offered and taught by Central Carolina Technical Institute.





DRAFTING & DESIGN— MECHANICAL

Purpose of Curriculum

This curriculum guide was prepared for the purpose of outlining a training program for students of mechanical drafting and design technology. There are certain identifiable duties which are common to all technicians of this general classification and which comprise the basic areas of technical knowledge they need. This curriculum has been designed for training persons in the accepted performance of these basic duties that will be assigned, and to enable the individual student to become proficient in a short time after he becomes employed in the industry.

Courses in general education have been included to give a student the assurance and understanding that comes with education upon a broad base. The technician is associated with many levels of thought and expression—administrative personnel, scientists, engineers, skilled workmen—and must be able to communicate effectively with all levels. Courses containing essential information from related subject areas, such as mathematics, physics, and mechanics have been included in order to provide the student a better academic base for his training. Emphasis is placed upon ability to think and plan, as well as drafting procedures and techniques.

Job Description

Mechanical drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models and items for production use.

These technicians perform many aspects of drafting in a specialized field, such as the developing of the drawing of a section, sub-assembly or major component. Investigating design factors and availability of material and equipment, production methods and facilities are frequent assignments. They assist in the design of units and controls

from specifications by utilizing drawings of existing units and reports on functional performance. They may draw components in industrial fields based on engineers' original design concepts or specific ideas. Also, they may be assigned as coordinators for the execution of related work of other design, production, tooling, material and planning groups. Technicians with experience in this classification may often supervise the preparation of working drawings.

These technicians are employed in many types of manufacturing, fabrication, research development and service industries. Substantial numbers also are employed in communications, transportation, public utilities, consulting engineering firms, and federal, state, and local governments.

DRAFTING AND DESIGN ENGINEERING
TECHNOLOGY—MECHANICAL

Course Title		Hrs.	Pr. Wk.	Qr.
		Cl.	Lab.	Hrs. Cr.
First Quarter				
T-MAT 100	Pre-Technical Mathematics	5	4	7*
T-DFT 101	Technical Drafting	1	6	3
T-ELN 101	Electronic Instruments and Measurements	1	4	3
T-MEC 116	Engineering Materials	3	3	4
		10	17	17
Second Quarter				
T-MAT 101	Technical Mathematics	5	0	5
T-DFT 102	Technical Drafting	1	6	3
T-ELC 101	Fundamentals of Electricity	5	4	7
T-MEC 101	Machine Processes	2	4	4
		13	14	19
Third Quarter				
T-ENG 101	Grammar	3	0	3
T-MAT 102	Technical Mathematics	5	0	5
T-PHY 101	Physics: Properties of Matter	3	2	4
T-DFT 204	Descriptive Geometry	2	4	4
T-DFT 103	Technical Drafting	1	6	3
		14	12	19
Fourth Quarter (Summer)				
First Session:				
	Social Science Elective	3	0	3
T-DFT 212	Jig and Fixture Design	2	6	4
	Social Science Elective	3	0	3
T-PHY 102	Physics: Work, Energy, and Power	3	2	3
		11	8	13
Fifth Quarter				
T-MAT 103	Technical Mathematics	5	0	5
T-ENG 102	Composition	3	0	3
T-PHY 106	Applied Mechanics	5	0	5

T-PHY 104	Physics: Light and Sound	3	2	4
T-DFT 201	Technical Drafting	1	6	3
		<u>17</u>	<u>8</u>	<u>20</u>

Sixth Quarter

T-DFT 211	Mechanisms	3	2	4
T-MEC 205	Strength of Materials	3	2	4
T-ENG 204	Oral Communications	3	0	3
T-MEC 208	Machine Design I	3	3	4
T-MEC 210	Physical Metallurgy	3	3	4
		<u>15</u>	<u>10</u>	<u>19</u>

Seventh Quarter

T-MEC 237	Control Systems	2	4	4
T-ENG 103	Report Writing	3	0	3
T-MEC 209	Machine Design II	3	3	4
T-MEC 112	Manufacturing Processes	3	3	4
T-DFT 213	Die Design	2	4	4
		<u>13</u>	<u>14</u>	<u>19</u>

* Indicates institutional credit.





ELECTRONICS TECHNOLOGY

Purpose of Curriculum

The field of electronics has developed at a rapid pace since the turn of the century. For many years the major concern of electronics was in the area of communications. Developments during World War II and in the period since have revolutionized production techniques. New industries have been established to supplement the need and demand for electronics equipment.

Many opportunities exist for men and women with a technical education in electronics. This curriculum provides a basic background in electronic related theory with practical applications of electronics for business and industry. Courses are designed to develop competent electronics technicians who may take their place as an assistant to an engineer, or as a liaison between the engineer and the skilled craftsman.

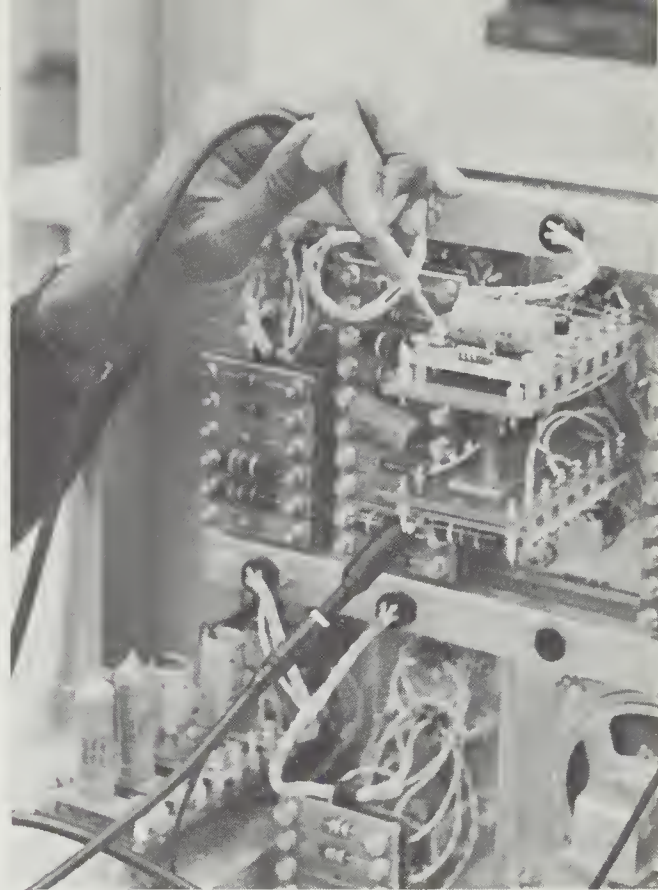
Job Description

The electronics technician may start in one or more of the following areas: research, design, development, production, maintenance or sales. He may be an assistant to an engineer, an engineering aide, laboratory technician, supervisor or equipment specialist. His training is similar to that of an engineer, but in less depth and more practical in application. He can function as a liaison between an engineer and the skilled craftsman.

ELECTRONICS TECHNOLOGY

		Hrs. Pr. Wk.		Qr.
Course Title		Cl.	Lab.	Hrs. Cr.
First Quarter				
T-MAT 100*	Pretechnical Mathematics	5	4	7
T-DFT 101	Technical Drafting	1	6	3
T-ELN 101	Electronics Instruments & Measurements	1	4	3
T-MEC 116	Engineering Materials	3	3	4
		10	17	17
Second Quarter				
T-MAT 101	Technical Mathematics	5	0	5
T-DFT 102	Technical Drafting	1	6	3
T-ELC 101	Fundamentals of Electricity	5	4	7
T-MEC 101	Machine Processes	2	4	4
		13	14	19
Third Quarter				
T-ENG 101	Grammar	3	0	3
T-MAT 102	Technical Mathematics	5	0	5
T-PHY 101	Physics: Properties of Matter	3	2	4
T-ELC 102	Fundamentals of Electricity (AC)	5	4	7
		16	6	19
Fourth Quarter (Summer)				
First Session				
	Social Science Elective	3	0	3
T-ELN 105	Control Devices	5	6	7
Second Session				
	Social Science Elective	3	0	3
T-PHY 102	Physics: Work, Energy, and Power	3	2	3
		14	8	16
Fifth Quarter				
T-ENG 102	Composition	3	0	3
T-PHY 104	Physics: Light and Sound	3	2	4
T-MAT 103	Technical Mathematics	5	0	5
T-ELN 205	Application of Vacuum Tubes & Transistors	5	6	7
T-ELN 231A	Electronic Communication	0	3	1*
		16	11	20
Sixth Quarter				
T-MAT 201	Technical Mathematics	5	0	5
T-ENG 204	Oral Communication	3	0	3
T-ELN 214	Wave Shaping and Pulse Circuits	2	3	3
T-ELN 210	Semi Conductors and Circuit Analysis	5	3	6
T-ELN 231B	Electronic Communication	0	4	2*
		15	10	19
Seventh Quarter				
T-ENG 103	Report Writing	3	0	3
T-ELN 215	Wave Shaping and Pulse Circuits	2	3	3
T-ELN 220	Electronic Systems	5	4	7
T-ELN 227	UHF and Microwave Fundamentals	3	3	4
		13	10	17

* Indicates institutional credit.



INDUSTRIAL MAINTENANCE MECHANICS— ELECTROMECHANICAL

Purpose of Curriculum

This curriculum will provide a training program in the basic knowledge, fundamentals, and industry practices in the maintenance and repair of industrial machinery and electromechanical equipment. With the industrial growth of North Carolina and the variety of machinery and equipment used throughout the average manufacturing plant, qualified maintenance mechanics who have a basic knowledge of electrical-mechanical systems and their application are in constant demand. The 1966-70 manpower survey recently completed by the North Carolina Employment Security Commission indicates 1,189 additional maintenance mechanics needed by spring of 1971.

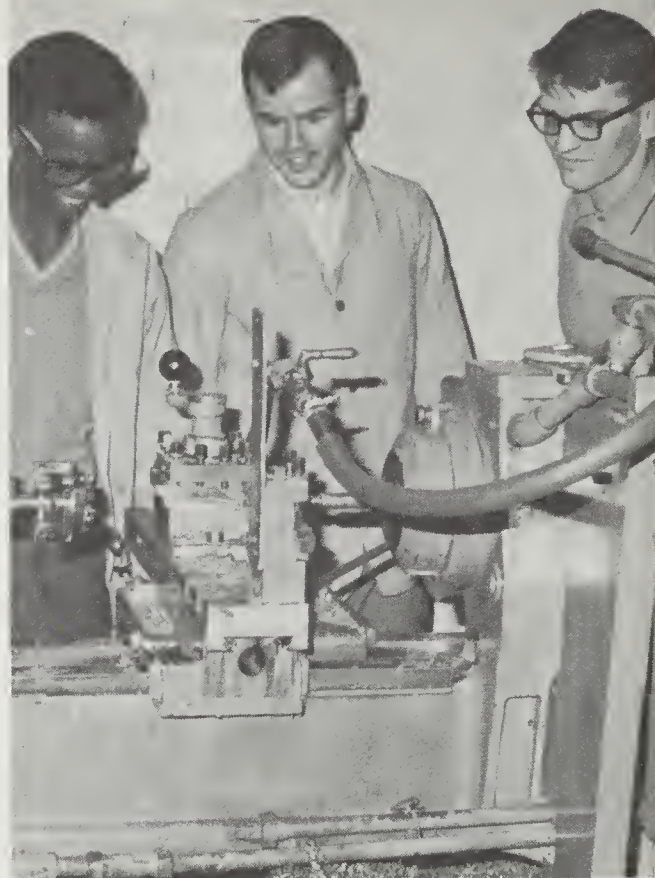
Job Description

The electromechanical mechanic repairs and maintains, in accordance with drawings, diagrams, sketches, operation manuals and manufacturers specifications, machinery and mechanical equipment such as pumps, compressors, boilers, motors, electrical controls, pneumatic and hydraulic devices, and production machines found in industrial plants. He uses hand tools, power tools, machine tools, welding equipment, and precision-measuring and testing instruments.

He must observe mechanical electrical devices in operation and listen to their sounds to locate causes of trouble. Much of a repairman's time is spent in preventative maintenance. He also may keep maintenance records of the equipment he services.

INDUSTRIAL MAINTENANCE
MECHANICS—ELECTROMECHANICAL

Course Title		Hrs. Pr. Cl.	Wk. Shop	Qr. Cr. Hrs.
First Quarter				
MEC 1101	Machine Tool Theory and Practice	3	9	6
MAT 1101	Fundamentals of Mathematics	5	0	5
PHY 1101	Applied Science	3	2	4
MEC 1117	Treatment of Metals	3	5	4
		14	16	19
Second Quarter				
EMS 1101	Industrial Maintenance Shop Practice	2	6	4
MAT 1115	Electrical Mathematics	5	0	5
PHY 1102	Applied Science	3	2	4
DFT 1121	Drafting	0	6	2
ELC 1112A	Direct and Alternating Current I	2	4	3
		12	18	18
Third Quarter				
ELC 1112B	Direct and Alternating Current II	3	9	5
DFT 1122	Drafting	0	6	2
WLD 1120	Welding: Oxyacetylene	3	9	6
		6	24	13
Summer Quarter				
EMS 1299	Cooperative Occupational Education	3	40	7
Fourth Quarter				
EMS 1102	Electromechanical Systems I	3	12	7
WLD 1121	Welding ARC	1	3	2
ENG 1101	Reading Improvement	3	0	3
AHR 1121A	Commercial Refrigeration Systems	2	6	4
		9	21	16
Fifth Quarter				
EMS 1103	Electromechanical Systems II	3	12	7
ENG 1102	Communicative Skills	3	0	3
WLD 1124	Welding: Pipe	4	8	5
		10	20	15
Sixth Quarter				
AHR 1104	Boilers and Heating Systems	2	6	4
MEC 1139	Basic Hydraulics	2	6	4
EMS 1110	Electrical Systems Design	2	4	3
AUT 1115	Small Engines	2	6	3
		8	22	14



MACHINIST

Purpose of Curriculum

This curriculum was prepared to meet a definite need for training of machinists. Surveys recently completed in North Carolina show that many of the existing industries lack time and facilities for training enough machinists to meet present and planned needs. Expanding industries already located in our state and new industries under development invariably express the need for skilled craftsmen who have the background knowledge and potential to advance.

This guide is designed to give learners the opportunity to acquire basic skills and the related technical information necessary to gain employment and build a profitable career in the machine shop industry in the state. It is comprised of the joint views of committees responsible for its development.

Job Description

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. His training and experience enable him to plan and carry through all the operations needed in turning out a machined product and to switch readily from one kind of product to another. A machinist is able to select the proper tools and material required for each job and to plan the cutting and finishing operations in their proper order so that he can complete the finished work according to blueprint or written specifications. He makes standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining. He often uses precision measuring instruments such as micrometers and gages to measure the accuracy of his work to thousandths of an inch.

This skilled worker must be able to set up and operate most types of machine tools. The machinist also must know the composition of metals so that he can heat and quench cutting tools and parts to

improve machinability. His wide knowledge enables him to turn a block of metal into an intricate, precise part.

MACHINIST

Course Title	Hrs. Pr. Wk.		Qr.
	Cl.	Shop	Hrs. Cr.
First Quarter			
MEC 1101 Machine Tool Theory and Practice	3	9	6
MAT 1101 Fundamentals of Mathematics	5	0	5
PHY 1101 Applied Science	3	2	4
DFT 1101 Drafting	0	6	3
	11	17	18
Second Quarter			
MEC 1102 Machine Tool Theory and Practice	3	9	6
MAT 1103 Geometry	5	0	5
PHY 1102 Applied Science	3	2	4
DFT 1102 Drafting	0	6	3
	11	17	18
Third Quarter			
MEC 1103 Machine Tool Theory and Practice	3	9	6
MAT 1123 Machinist Mathematics	5	0	5
MEC 1115 Treatment of Ferrous Metals	3	3	4
DFT 1123 Drafting	0	6	3
	11	18	18
Fourth Quarter			
MEC 1104 Machine Tool Theory and Practice— Special Tools	3	9	6
MEC 1105 Tool Making: Introduction	2	6	4
MEC 1116 Treatment of Non-Ferrous Metals	3	3	4
ENG 1101 Reading Improvement	3	0	3
	11	18	17



POLICE SCIENCE

Purpose of Curriculum

Law enforcement techniques have evolved from rather simple jobs, requiring simple qualifications, to more complex activities requiring a large capacity for highly specialized knowledge.

Traditional policies and entrance requirements, coupled with education and training standards have led to a shortage of trained law enforcement technicians and administrators.

Today, as police agencies move toward a professional status, educational institutions are becoming the training centers for tomorrow's policemen. The North Carolina Department of Community Colleges' Law Enforcement Training Program is dedicated to the purpose of developing proficiency in leadership in these people. Its development is based on present and future educational and training needs rather than those of the past.

The program is designed to provide occupational training for the individual who has a definite interest in and adaptability to a law enforcement career. It offers practical, technical and general instruction to meet the requirements of various law enforcement agencies and provides the students with the skills, knowledges, and attitudes necessary for employment at the operational level and development for management roles.

There is an increasing demand for properly trained law enforcement officers in industry, municipal, county, state and federal agencies; and there is every reason to believe that the highly trained law enforcement officer will find challenging opportunities with public and private law enforcement services.

Job Description

Law enforcement is that important division of government which is assigned the power and responsibility to maintain order and en-

force law. Its basic functions may be classified as prevention of crime, suppression of criminal activity, apprehension of offenders, preservation of the peace, regulation of noncriminal conduct, and the protection of life and property.

To the original and primary police functions of preserving the peace and maintaining law and order, the ever widening scope of government activity has added a host of other duties to the various law enforcement agencies, ranging from the regulation of traffic and the suppression of vice to the enforcement of minor laws and ordinances that regulate the minutiae of business and private life in a modern society.

The first three quarters of this curriculum will be taught at Central Carolina Technical Institute. The last three quarters which contain the police courses that require laboratory work must be taken at Durham Technical Institute in Durham, North Carolina.

POLICE SCIENCE TECHNOLOGY

Course Title	Hrs. Pr. Wk.		Qr.
	Cl.	Lab.	Hrs. Cr.
First Quarter			
T-ENG 101 Grammar	3	0	3
T-MAT 110 Business Math	5	0	5
T-PSC 101 Introduction to Law Enforcement	5	0	5
T-PSY 102 General Psychology	5	0	5
	18	0	18
Second Quarter			
T-ENG 102 Composition	3	0	3
T-SOC 102 Principles of Sociology	5	0	5
T-POL 102 Government—National	5	0	5
T-PSC 220 Police Organization & Administration I	5	0	5
	18	0	18
Third Quarter			
T-ENG 103 Report Writing	3	0	3
T-POL 103 Government—State and Local	5	0	5
T-PSC 110 Police Role in Crime & Delinquency	5	0	5
_____ Elective	5	0	5
	18	0	18
Fourth Quarter			
T-ENG 204 Oral Communications	3	0	3
T-PSC 201 Traffic Planning and Management	4	2	5
T-CHM 101 Chemistry	4	2	5
T-PSC 115 Criminal Law	5	0	5
	16	4	18
Fifth Quarter			
T-PSC 205 Criminal Evidence	5	0	5
T-PSC 210 Criminal Investigation	5	0	5
_____ Elective	5	0	5
_____ Elective	3	0	3
	18	0	18

Sixth Quarter

T-PSC 211	Introduction to Criminalistics	4	3	5
T-PSC 225	Criminal Procedure	5	0	5
T-PSY	Adolescent Psychology	5	0	5
	Elective	3	0	3
		17	3	18





PRACTICAL NURSE EDUCATION

**A ONE-YEAR POST HIGH SCHOOL
VOCATIONAL CURRICULUM.
GRADUATES ELIGIBLE FOR
STATE BOARD EXAMINATION
AND LICENSE.**

Course Description

The Practical Nurse Education course is planned to meet the needs of hospitals, nursing homes and other medical agencies in North Carolina and other states. It is sponsored by the Department of Community Colleges State Board of Education Vocational Technician Division. The course outline has been studied and approved by representatives of a number of the major medical agencies.

Practical nurse training includes classroom study of basic nursing skills and related subjects, such as body structure and functions, conditions of illness, nutrition, and types of medicine and medications, as well as supervised clinical practice in applying this training to actual situations.

General Qualifications

Among the personal qualities essential for practical nurses are the desire to help sick people and an aptitude for the work. Also important are tact, patience, understanding, emotional stability, dependability and good physical health.

The successful practical nurse in addition to the personal qualities stated, must be capable of learning the basic nursing skills and related subjects. This requires an understanding or aptitude for communication, biological sciences and psychology. Those who feel they are able to meet these requirements and think they have the necessary personal qualities to do well in this field should give special consideration to training for this type of employment.

Employment

Licensed practical nurses assist in the care and treatment of the physically and mentally ill, under the direction of physicians or professional nurses. As members of a nursing team, they perform many

of the less complex tasks, thus freeing professional nurses for more skilled and specialized duties. They may also assist physicians or professional nurses with complicated diagnostic procedures or treatments.

Practical nurses usually give prescribed treatments and medications, take patients' temperature, pulse, and blood pressure readings, and help with bathing and other personal hygiene tasks. They may also provide nursing care for newborn babies and their mothers, the handicapped, the chronically ill, or the convalescent. In doctors offices, practical nurses assist physicians or professional nurses in the examination of patients, give simple medications or treatments as directed, make routine laboratory tests, and perform some clerical tasks.

Licensed practical nurses are expected to have excellent employment opportunities. The supply of licensed workers has not kept pace with the demand generated by the establishment of new positions vacated by practical nurses who retire, die or leave the nursing field for other reasons. Many part-time positions will continue to be available, thus enabling women who have families or other responsibilities to continue to work as practical nurses.

PRACTICAL NURSE EDUCATION

Course Title		Hours Per Week			Qr. Hrs. Cr.
		Cl.	Lab.	Clin.	
First Quarter					
PNE 1101	Fundamentals of Practical Nursing	6	4	2	8
PNE 1103	Anatomy and Physiology	4	0	0	4
PNE 1104	Growth and Development	3	0	0	3
ENG 1101	Communications	3	0	0	3
PSY 1101	Human Relations	2	0	0	2
		18	4	2	20
Second Quarter					
PNE 1105	Introduction: Medical-Surgical I	5	0	0	5
PNE 1112	Maternity Nursing: Obstetrics	3	0	0	3
PNE 1102	Nutrition & Diet Therapy	2	0	0	2
PNE 1113	Clinical Experience I	0	0	24	8
PNE 1110	Pediatrics I: Nursing of Children	2	2	0	2
		12	2	24	20
Third Quarter					
PNE 1106	Medical—Surgical II	5	0	0	5
PNE 1111	Pediatrics II: Nursing of Children	2	0	0	2
PNE 1108	Pharmacology I	3	2	0	4
PNE 1114	Clinical Experience II	0	0	24	8
		10	2	24	19

Fourth Quarter

PNE 1107	Medical—Surgical III	6	0	0	6
PNE 1109	Pharmacology II	2	0	0	2
PSY 1101A	Human Relations	3	0	0	3
PNE 1115	Clinical Experience III	0	0	24	8
		11	0	24	19





**RADIO-TELEVISION
BROADCASTING**

Purpose of Curriculum

The purpose of this curriculum is to provide a general outline of a course of study to prepare men and women to enter the broadcast industry, properly trained, to assume normal duties in a broadcasting station. Students will be given training to enable them to qualify for the Federal Communications Commissions' third class operator's license.

The curriculum is designed to offer the student sufficient training so that he can perform efficiently as an announcer, salesman, or newsgatherer-writer.

Job Description

The broadcast industry is currently faced with a shortage of personnel, especially persons with the necessary skills to perform in the areas of announcing, sales, writing, and production.

The graduate will be prepared to: work as an announcer, interview guests, gather and prepare news for presentation and present same, sell time for advertising and write commercials and produce them, operate station control boards and equipment, and keep logs.

RADIO-TELEVISION BROADCASTING

		Hrs. Pr. Wk.		Qr.
		Cl.	Lab.	Hrs.
Course Title				Cr.
First Quarter				
T-ENG 101	Grammar and Composition	3	0	3
T-PSY 206	Applied Psychology	3	0	3
T-BUS 102	Typewriting*	2	3	3

T-SPH 100	Voice and Diction	3	2	4
T-RTV 101	Introduction to Broadcasting	5	0	5
		16	5	18

Second Quarter

T-ENG 102	Grammar and Composition	3	0	3
T-RTV 103	Broadcast Announcing & Performance—I	3	4	5
T-RTV 110	Broadcast Operations—Traffic	3	4	5
T-RTV 102	Newsgathering-Writing-Sports	3	4	5
T-RTV 109	FCC Rules and Regulations	2	0	2
		14	12	20

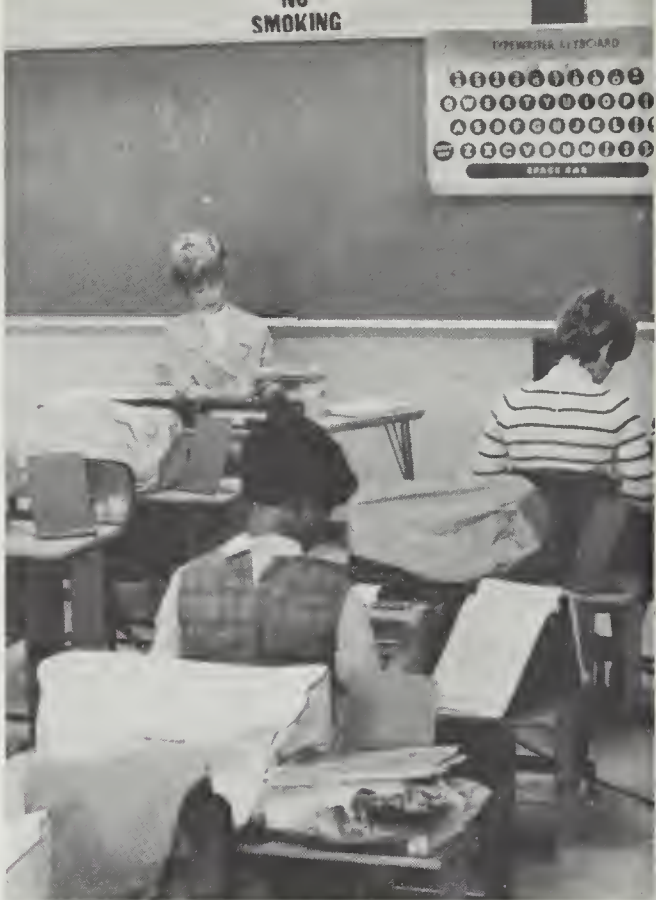
Third Quarter

T-ENG 204	Oral Communications	3	0	3
T-RTV 104	Broadcast Announcing & Performance—II	3	4	5
T-RTV 115	Radio Production Techniques	3	2	4
T-RTV 107	Broadcast Sales and Promotion	3	2	4
T-RTV 114	Commercial Writing and Production	3	2	4
		15	10	20

Fourth Quarter

T-ENG 103	Report Writing	3	0	3
T-RTV 105	Broadcast Announcing & Performance—III	3	4	5
T-RTV 106	Programming	3	2	4
T-RTV 199	Broadcasting Practicum	0	12	4
		9	18	16

* Credit may be received by proficiency.



SECRETARIAL SCIENCE
EXECUTIVE—LEGAL—MEDICAL—
ENGINEERING

Purpose of Curriculum

The demand for better qualified secretaries to work with professional persons continues to increase. This curriculum with the four options is designed to produce individuals who will be well-versed in the accepted procedures they will encounter on the job.

Instruction emphasizes the development of speed and accuracy.

Job Description

The graduate of one of the four options can choose a position with many types of businesses and industries within her option.

SECRETARIAL SCIENCE
Executive—Legal—Medical—Engineering

Course Title	Hrs. Pr. Wk.		Qr.
	Cl.	Lab.	Hrs. Cr.
First Quarter			
T-ENG 101A Grammar	3	0	3
T-BUS 102 Typewriting (or elective)	2	3	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	3	2	4
T-BUS 106 Shorthand (or elective)	3	2	4
	16	7	19
Second Quarter			
T-ENG 101B Grammar	3	0	3
T-BUS 103 Typewriting (or elective)	2	3	3
T-BUS 107 Shorthand	3	2	4
T-BUS 120 Accounting	5	6	8
T-BUS 115 Business Law	3	0	3
	16	11	21

Third Quarter

T-ENG 102	Composition	3	0	3
T-BUS 104	Typewriting	2	3	3
T-BUS 108	Shorthand	3	2	4
T-BUS 110	Office Machines	2	2	3
T-BUS 121	Accounting II	5	6	8
		<u>15</u>	<u>13</u>	<u>21</u>

Fourth Quarter

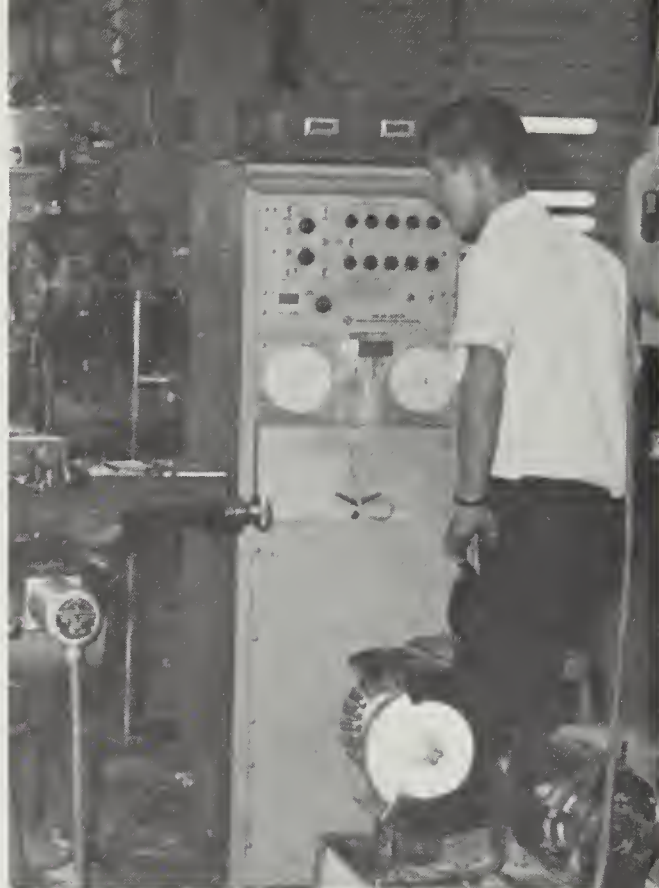
T-ENG 204	Oral Communication	3	0	3
T-BUS 206	Dictation and Transcription	3	2	4
T-BUS 205	Advanced Typewriting	2	3	3
T-BUS 211	Office Machines	2	2	3
T-BUS 134	Personal Development	3	0	3
T-BUS 263	Payroll Taxes	3	0	3
		<u>16</u>	<u>7</u>	<u>19</u>

Fifth Quarter

T-ENG 206	Business Communication	3	0	3
T-BUS 207	Dictation and Transcription	3	2	4
T-BUS 214	Secretarial Procedures	3	2	4
T-BUS 183	Terminology & Vocabulary (Exc-Med-Leg-Eng)	3	2	4
T-PSY 206	Psychology (or elective)	3	0	3
T-ECO 102	Economics	3	0	3
		<u>18</u>	<u>6</u>	<u>21</u>

Sixth Quarter

T-BUS 208	Dictation and Transcription	3	2	4
T-BUS 271	Office Management	3	2	4
T-ENG 103	Report Writing	3	0	3
T-BUS 112	Filing	3	0	3
T-BUS 184	Terminology & Vocabulary (Exc-Med-Leg-Eng)	3	2	4
		<u>15</u>	<u>6</u>	<u>18</u>



TOOL MAKER

Purpose of Curriculum

This curriculum was prepared to meet a need for training of tool makers. Surveys recently completed in North Carolina show that many of the existing industries lack time and facilities for training enough tool makers to meet present and planned needs. Expanding industries already located in our state and new industries under development invariably express the need for skilled craftsmen who have the background knowledge and potential to advance.

This guide is designed to give learners the opportunity to acquire basic skills and the related technical information necessary to gain employment and build a profitable career in the tool making trade in the state.

Job Description

Tool makers are highly skilled, creative workers, whose products—tools and special guiding and holding devices—are the basis of mass production in metalworking industries. Tool makers specialize in producing jigs and fixtures (devices required to hold metal while it is being shaved, stamped, or drilled). They also make gages and other measuring devices that are used in manufacturing precision metal parts.

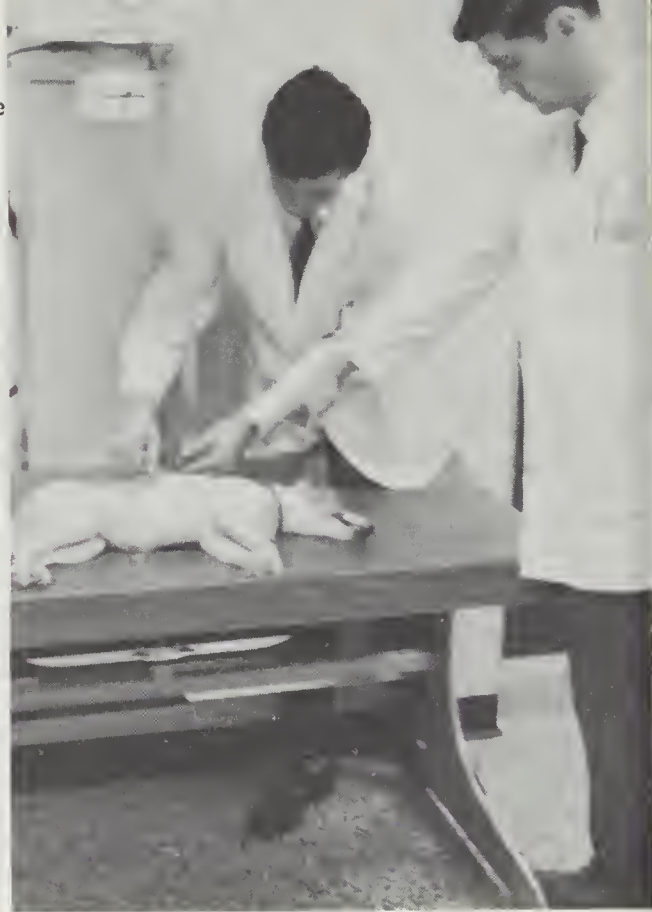
In comparison with most other machining workers, tool makers have a broader knowledge of machinery operations, shop practices, mathematics, and blueprint reading, and can work to closer tolerances and do more precise handwork. They use almost every type of machine tool and precision-measuring instrument. They work with all metals and alloys commonly used in manufacturing.

Since this work is highly skilled, persons planning to enter the trade should have a good working knowledge of mathematics and physics, as well as considerable mechanical ability, finger dexterity,

and a liking for painstaking work. Because tool makers do precision work, the areas in plants and shops where they work are clean and well-lighted.

TOOL MAKER

Course Title	Hrs. Pr. Wk.		Qr.
	Cl.	Shop	Hrs. Cr.
First Quarter			
MEC 1101 Machine Tool Theory and Practice I	3	9	6
MAT 1101 Fundamentals of Mathematics	5	0	5
PHY 1101 Applied Science	3	2	4
ENG 1101 Reading Improvement	3	0	3
	14	11	18
Second Quarter			
MEC 1102 Machine Tool Theory and Practice II	3	9	6
MAT 1102 Algebra	5	0	5
PHY 1102 Applied Science	3	2	4
DFT 1121 Drafting—Trade I	0	6	2
	11	17	17
Third Quarter			
MEC 1103 Machine Tool Theory and Practice III	3	9	6
MAT 1123 Machinist Mathematics	5	0	5
DFT 1122 Drafting—Trade II	0	6	2
MEC 1115 Metallurgy—Treatment of Ferrous Metals	3	3	4
	11	18	17
Fourth Quarter			
MEC 1104 Machine Tool Theory and Practice IV	1	6	3
MEC 1151 Tool Making: Jigs and Fixtures I	1	12	5
MEC 1159 Blue Print Reading and Inspection	2	2	3
	4	20	11
Fifth Quarter			
MEC 1154 Die Making I: Introduction	2	9	5
MEC 1151A Tool Making: Jigs and Fixtures II	1	6	3
MEC 1116 Metallurgy—Treatment of Non-Ferrous Metals	3	3	4
DFT 1123 Drafting—Trade III	0	6	2
	6	24	14
Sixth Quarter			
MEC 1152 Tool Making: Gages and Special Tools	2	9	5
MEC 1155 Die Making II	2	12	6
ENG 1102 Communicative Skills	3	0	3
	7	21	14
Seventh Quarter			
MEC 1156 Die Making III	1	12	5
MEC 1158 Introduction to Plastic Molding	2	9	5
MEC 1126 Heat Treating	1	4	2
	4	25	12



VETERINARY MEDICAL TECHNOLOGY

Purpose of Curriculum

The purpose of the Veterinary Medical Technology curriculum is to provide training for young men and women who desire to become veterinary medical technologists. Ultimately it will provide the sorely needed technical assistance to the veterinarian and assist in the upgrading of the profession. Students graduating in this curriculum will be capable of accepting many job opportunities of a technical nature which exist in the field of veterinary medicine.

For years competently trained personnel have been needed to work in the many different areas of veterinary medicine. In the past veterinarians have attempted to fill these positions with technicians who received their training in the human field or by employing some individual who could receive on the job training.

The objectives of the Veterinary Medical Technology curriculum are to:

1. Develop knowledge in the area of reception and record keeping, restraint of animals for examination and treatment, operating room techniques, medication, feeding, and maintaining proper sanitation.
2. Develop proficiency in performing certain laboratory tests incident to the diagnosis and proper care of domestic animals.
3. Understand the importance of effective communication and its application to proper public relations.

Job Description

The curriculum is primarily designed to provide training for young men and women as technicians to assist the veterinarian with small and large animal practice. Although emphasis in the curriculum is placed on developing proficiency in assisting the private practicing veterinarian, the instruction will also prepare the student for job

opportunities in diagnostic laboratories, research, and other areas dealing with animal care.

The veterinary medical technician assists the veterinarian by performing a broad range of responsible technical duties essential for the proper care of animals. Duties include such activities as reception and record keeping, restraint of animals for examination and treatment, assisting in the performance of surgical procedures, performance of laboratory tests, medication, feeding, and maintaining proper sanitation.

VETERINARY MEDICAL TECHNOLOGY

Course Title	Hrs. Pr. Wk.		Qr.
	Cl.	Lab.	Hrs. Cr.
First Quarter			
T-ENG 101 Grammar	3	0	3
T-BIO 105 Biology	3	6	6
T-MAT 100A Fundamentals of Technical Mathematics ..	5	0	5
T-VET 110 Large and Small Animal Breeds ..	5	0	5
T-BUS 102 Typing	2	3	3
	18	9	22
Second Quarter			
T-ENG 102 Composition	3	0	3
T-CHM 101 Chemistry I	3	6	6
T-BUS 120A Accounting	3	4	5
T-VET 120 Animal Anatomy and Physiology	3	4	5
	12	14	19
Third Quarter			
T-POL 201 United States Government	3	0	3
T-CHM 106 Chemistry II	3	3	4
T-VET 130 Laboratory Techniques I	2	4	4
T-VET 132 Animal Parasitology	3	4	5
T-VET 134 Small Animal Care ..	2	4	4
	13	15	20
Summer Quarter			
T-VET 299 Cooperative Occupational Education	0	40	4
Fourth Quarter			
T-ENG 204 Oral Communications	3	0	3
T-VET 240 Clinical Practices I	2	4	4
T-VET 242 Laboratory Techniques II	2	4	4
T-VET 244 Animal Pharmacology	3	2	4
T-PSY 206 Applied Psychology	3	0	3
	13	10	18
Fifth Quarter			
T-VET 250 Nutrition	3	2	4
T-BUS 110 Office Machines	2	2	3
T-VET 252 Small Animal Clinic I ..	2	4	4
T-VET 254 Animal Pathology	3	2	4
T-VET 256 Clinical Practices II	2	4	4
	12	14	19

Sixth Quarter					
T-ENG 103	Reporting Writing	3	0	3	
T-VET 260	Entomology	2	2	3	
T-VET 262	Small Animal Clinic II	3	6	6	
T-VET 264	Office Practices	4	0	4	
T-VET 266	Clinical Practices III	2	4	4	
		14	12	20	



TELEPHONY

Introduction

The North Carolina School of Telephony was founded jointly by the N. C. Independent Telephone Association, the N. C. Department of Community Colleges and Central Carolina Technical Institute to provide training for employees of telephone companies. This training is especially tailored for the telephone technician to increase and improve his technical knowledge and understanding of telephony. Initial training will be offered in those areas where there is little or no training available.

Each course will be short and will be generally independent of other courses. In some instances a working knowledge or experience will be required in order that the student may gain maximum benefit from the material covered.

Admission

Class enrollment for each course is limited to insure that each trainee receives maximum instruction. Enrollment must be completed at least two weeks prior to the class schedule. Those courses not filled by this time will be cancelled.

Finances

Instructional fee will be 10¢ per class hour for instate students and 25¢ per class hour for out-of-state students, plus an enrollment fee to cover manuals and other instructional materials.

Courses Presently Available

Climbing Fundamentals
Basic Construction
Station Installation
Station Maintenance
Paystation Installation and Maintenance
Principles of Electricity I
Principles of Electricity II
Key System Installation and Maintenance
Air Dryer Maintenance and Cable Pressurization
Fundamentals of C. O. Operations
SXS Maintenance and Adjustments
XY Maintenance and Adjustments
PABX Installation and Maintenance
Cable Splicing
Cable Repair
Additional courses will be offered as need is indicated.

AGRICULTURE

- T-AGR 127 Animal Nutrition** 3 2 4
 A course dealing with the principles of nutrition and their application to feeding practices of cattle, horse, sheep, and swine production in North Carolina.
- T-AGR 145 Entomology** 2 4 4
 A study of the major insects of the area, their identification, harmful effects, and life history.
 Prerequisite: None.
- T-AGR 155 Plant Pathology** 2 4 4
 A course dealing with nature and symptoms of diseases in plants; the characteristics of plant disease, casual agents, identification, and control of the major plant diseases of the area.
 Prerequisite: T-AGR 170.
- T-AGR 170 Plant Science** 2 4 4
 An introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of seed bearing plants with application to certain commercially important plants in North Carolina.
 Prerequisite: None.
- T-AGR 180 General Poultry** 3 2 4
 An introduction to the science of poultry production. The major phases of the study include the history of the poultry industry; the anatomy and physiology of the chicken; the breeds and varieties; the breeding principles; the principles of incubation, brooding, rearing, feeding, housing, and management; marketing poultry products; and the science of disease and parasite prevention and control.
 Prerequisite: None.
- T-AGR 185 Soil Science and Fertilizers** 3 4 5
 A course dealing with basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil, and conservation of soil fertility.
 Prerequisite: None.
- T-AGR 201 Agricultural Chemicals** 3 6 6
 A study of farm chemical pesticides, their ingredients, formulation, and farm application, with emphasis on the effective and safe use of chemicals in agricultural pest control.
 Prerequisite: T-CHM 101.
- T-AGR 218 Agricultural Mechanization** 3 4 5
 A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed grinders and mixers, storage facilities, materials handling systems and other labor-saving devices.
 Prerequisite: None.
- T-AGR 228 Livestock Diseases and Parasites** 3 2 4
 A course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis on the cause, damage, symptoms prevention, and treatment of parasites and diseases, and management factors related to disease and parasite prevention and control.
 Prerequisite: T-BIO 105.
- T-AGR 271 Field Crops** 3 4 5
 A general survey course dealing with the major field crops grown in North Carolina. Special emphasis will be given to tobacco technology,

pastures and forage crops, and weeds and their control.

Prerequisite: None.

T-AGR 279 Farm Forestry 3 4 5

A course dealing with the fundamentals of forestry and farm forestry problems, including planting, protecting, thinning, and harvesting.

Prerequisite: None.

T-AGR 299 Research Problems 2 4 4

The solution and reporting of a problem worked out between the student and his faculty advisor.

Prerequisite: None.

AIR-CONDITIONING AND REFRIGERATION

AHR 1101 Automotive Air-Conditioning 2 6 4

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary to install units in vehicles. The student will learn the necessary skills to service all types of air conditioning units commonly found on today's automobiles. Emphasis will be placed on correction of control problems as well as troubleshooting components.

Prerequisites: PHY 1101, 1102; AUT 1112, 1115

AHR 1104 Boilers and Heating Systems 2 6 4

A study of oil and gas fired hot water boilers and hot air furnaces. Trouble shooting and preventative maintenance will be stressed. Auxiliaries such as water pumps, fans, blowers, and the theory of combustion of fuels will be studied.

Prerequisite: None.

AHR 1121A Commercial Refrigeration Systems 2 6 4

An introduction to the principles of commercial refrigeration, terminology the use and care of tools and equipment, and the identification and function of the component parts of a system. Other topics will be basic laws of refrigeration; characteristics and comparisons of the various refrigerants; the use and construction of valves, fittings, and basic controls. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants.

Prerequisite: None.

AUTOMOTIVE MECHANICS

AUT 1101A Basic Hand Tools 1 2 1

This is an introductory course to the automotive shop with emphasis on the basic shop practices and correct use of shop tools and equipment such as; hand tools, power hand tools, lubricating equipment, brake cylinder hone, brake drum lathe, etc.

AUT 1101B Lubrication 1 2 2

The student will learn complete lubricating procedures for all the components of the automobile with emphasis on the proper lubricant for each component.

AUT 1101C Standard and Disc Brakes 2 7 4

Standard and disc brakes will be studied with emphasis placed on complete theory of operation, inspection, and major overhaul of brake systems.

AUT 1102A Engine Electrical Systems 2 6 4

This will be a thorough study of the electrical systems of the automobile. Included in the study will be cranking systems, charging systems, regulating

systems, ignition systems, lighting systems, and other electrical systems. All related electrical test equipment will be studied during this phase of instruction.

AUT 1102B Engine Fuel Systems 2 5 3

This will be a thorough study of fuel systems of the automobile. Included in the study will be fuel pumps, fuel filters, carburetors, and types of fuels. All related fuel testing equipment will be studied during this phase of instruction.

AUT 1103 Steering and Suspension Systems 2 6 4

Practical job instruction in adjusting and repairing of suspension and steering systems. The student will learn how to inspect and overhaul all types of suspension systems. Also the student will learn to completely overhaul all types of standard steering assemblies and make all the necessary adjustments.

Prerequisite: AUT 1101A-B-C or sufficient experience.

AUT 1104 Front End Alignment and Wheel Balancing 2 6 4

A thorough study of the theory and practice of front end alignment and balancing techniques of wheels and tires. The student will get practical experience on school owned front end alignment equipment as well as other makes of equipment. Emphasis will be placed on giving the student a complete knowledge of front end alignment theory so that the techniques can be applied to any front end alignment situation. Related areas of front end alignment work will be studied such as wheel balancing and frame alignment.

Prerequisite: AUT 1101A-B-C, AUT 1103.

AUT 1105 Internal Combustion Engines 2 6 4

Study of construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams, camshafts, oil pumps, cooling systems, lubrication systems, exhaust systems, and electrical systems. Emphasis will be placed on testing for problems before the engines are serviced to enable the student to diagnose problems before overhaul.

Prerequisite: AUT 1101A-B-C and AUT 1102A and B.

AUT 1106 Automotive Tune-Up 2 6 4

A study of engine performance with emphasis on modern diagnostic methods. Emphasis will be placed on testing for problems in engine electrical, fuel, and mechanical systems. Modern testing equipment will be studied. Practical problems will be introduced to study troubleshooting techniques.

Prerequisite: AUT 1102A and B, AUT 1105.

AUT 1107 Automotive Power Trains 2 6 4

A study of standard transmission, clutch systems, drive shafts, and differentials. The student will learn to diagnose problems and to overhaul all types of standard transmissions and differentials. Also, the student will service clutch systems and drive shafts.

Prerequisites: AUT 1105, PHY 1101, and 1102.

AUT 1108 Automatic Transmissions 3 9 6

A study of operation, service, and repair of automatic transmission systems. Emphasis will be placed on the theory behind the operation of automatic transmissions. The student will learn to test transmissions on the chassis dynamometer. Practical shop application will be given to the study of torque converters, hydraulic control systems, and complex planetary gearing. All popular makes of transmissions will be studied.

Prerequisites: AUT 1107; PHY 1101, 1102; PME 1126.

AUT 1109 Troubleshooting Automotive Systems 2 9 5

Emphasis is placed on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. This course is an opportunity to apply some of the knowledge gained in the previous specialized courses. Troubleshooting of automotive systems provide a full range of experiences in testing, adjusting, repairing, and replacing. All of the previously studied shop equipment will be used.

Prerequisites: Approval by Automotive Department Head.

AUT 1110 Electronic Charging and Ignition Systems 1 3 2

A study of automotive electronic charging and ignition systems. Transistor ignition systems will be studied along with transistor regulators. Included in the course will be complete study of the General Motors "Delco-tron," Ford Alternator, and Chrysler Alternator. Installation, troubleshooting, and maintenance will be stressed.

Prerequisites: PHY 1101, 1102; AUT 1102A & B; PME 1126.

AUT 1112 Power Accessories 1 3 2

A study of service and repair of the common power accessories found in the modern automobile. Major emphasis will be on power brakes and power steering. Other means of study will include power window lifts, power seats, windshield wipers, heaters, defrosters, and directional signals. Further emphasis will be placed on being able to troubleshoot these items as well as repair.

Prerequisites: PHY 1101, 1102; AUT 1102A & B; PME 1126; AHR 1101.

BIOLOGY**T-BIO 105 Biology 3 6 6**

A treatment of the protoplasmic concept, cell theory, and tissues. Selected plant and animal phyla will be surveyed to include the Thallophytes, Spermatophytes, Chordates, and Vertebrates. Laboratory work will stress good techniques in staining, mounting, dissection, culturing, microscopy, and other basic laboratory techniques.

Prerequisite: None.

***BIO 111E Biology 3 2 4**

An introduction to biological structure, function, processes, principles and concepts. The main divisions into which this subject matter is organized are environmental biology, cell biology, organismic biology, heredity and evolution.

*Indicates the college credit courses that will be offered by Campbell College on the campus of Central Carolina Technical Institute.

BUSINESS**T-BUS 101 Introduction to Business 3 2 4**

A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing; internal organization, and management.

Prerequisite: None.

T-BUS 102 Typewriting 2 3 3

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

Prerequisite: None.

T-BUS 103 Typewriting**2 3 3**

Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Minimum speed of 40 net words per minute for five minutes.

Prerequisite: T-BUS 102 or equivalent.

T-BUS 104 Typewriting**2 3 3**

Emphasis on production typing problems and speed building. Attention to the development of the students' ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Minimum speed of 50 net words per minute for five minutes.

Prerequisite: T-BUS 103.

T-BUS 106 Shorthand**3 2 4**

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Minimum dictation rate of 40 words per minute on new material for five minutes.

T-BUS 107 Shorthand**3 2 4**

Continued study of theory with greater emphasis on dictation for transcription. Minimum dictation rate of 60 words per minute required for five minutes on new material.

Prerequisite: T-BUS 106

T-BUS 108 Shorthand**3 2 4**

Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation rate of 80 words per minute for five minutes, on new material.

Prerequisite: T-BUS 107

T-BUS 110 Office Machines**2 2 3**

A general survey of the business and office machines. Students receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, calculators, and book-keeping machines.

Prerequisite: None.

T-BUS 112 Filing**3 0 3**

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, numeric, geographic, subject, Soundex, and Dewey Decimal filing.

T-BUS 115 Business Law**3 0 3**

A general course designed to acquaint the student with certain fundamentals and principles of the Uniform Commercial Code, including contracts, negotiable instruments, and agencies.

Prerequisite: None.

T-BUS 116 Business Law**3 0 3**

Includes the study of the Uniform Commercial Code pertaining to bailments, sales, riskbearing, partnerships, corporations, mortgages, and property rights.

Prerequisite: T-BUS 115.

T-BUS 120 Accounting I**5 6 8**

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting, collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.

Prerequisite: T-MAT 110.

T-BUS 120A Accounting

3 4 5

A fundamental course in principles and application of accounting for students other than business majors; includes the complete accounting cycle of recording, sorting, summarizing, and analyzing typical transactions for both service and mercantile enterprises.

Prerequisite: T-MAT 100A.

T-BUS 121 Accounting II

5 6 8

Partnership and corporation accounting including a study of payroll, federal and state taxes. Emphasis is placed on the recording, summarizing, and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.

Prerequisite: T-BUS 120.



T-BUS 123 Business and Managerial Finance 2 2 3

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study of short-term, long-term, and consumer financing.

Prerequisite: None.

T-BUS 124 Business & Managerial Finance 2 2 3

Financing, federal, state and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies.

Prerequisite: T-BUS 123.

T-BUS 134 Personal Development 3 0 3

Designed to help the student recognize the importance of physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on poise, grooming, and methods of personal improvement.

Prerequisite: None.

T-BUS 183 Terminology and Vocabulary (Exc.-Med.-Leg.-Eng.) 3 2 4

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices.

Prerequisite: T-BUS 107.

T-BUS 184 Terminology and Vocabulary (Exc.-Med.-Leg.-Eng.) 3 2 4

A course designed to develop an understanding of terminology and vocabulary related to business and professional offices. It develops the skill of taking dictation and transcribing materials appropriate to the course of study—Legal, Medical, Executive, or Engineering.

Prerequisite: T-BUS 108.

T-BUS 205 Advanced Typewriting 2 3 3

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents.

Prerequisite: T-BUS 104.

T-BUS 206 Dictation and Transcription 3 2 4

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study which includes a review of the theory and the dictation of familiar and unfamiliar materials at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material.

Prerequisite: T-BUS 108.

T-BUS 207 Dictation and Transcription 3 2 4

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new materials.

Prerequisite: T-BUS 206.

T-BUS 208 Dictation and Transcription 3 2 4

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material.

Prerequisite: T-BUS 207.

- T-BUS 211 Office Machines** 2 2 3
Instruction in the operation of duplicating equipment, and the dictating and transcribing machines.
Prerequisite: T-BUS 110.
- T-BUS 214 Secretarial Procedures** 3 2 4
Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.
Prerequisite: T-BUS 110.
- T-BUS 222 Accounting III** 3 6 6
Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes among other aspects the balance sheet, income and surplus statements, fundamentals, processes of recording, cash and temporary investments, and analysis of working capital. A thorough study of payroll taxes is also included.
- T-BUS 224 Intermediate Accounting** 5 2 6
Designed to follow the introductory study in accounting; giving special emphasis on the study of financial statements, current assets, inventories and investments in stocks and bonds.
Prerequisite: T-BUS 222.
- T-BUS 225 Cost Accounting** 3 4 5
Nature and purpose of cost accounting; accounting for direct labor, materials, and factory overhead; job cost, process cost and standard cost principles and procedures; selling and distribution costs; budgets, and executive use of cost figures.
Prerequisite: T-BUS 222.
- T-BUS 229 Taxes** 3 4 5
An introduction to federal taxes on income, income tax withholding; declaration of estimated tax by individuals; preparation of income tax returns for individuals; partnership and corporation returns.
Prerequisite: T-BUS 121.
- T-BUS 232 Salesmanship I** 2 2 3
A study of retail, wholesale, and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.
Prerequisite: None.
- T-BUS 233 Salesmanship II** 3 2 4
An advanced and additional study of retail, wholesale, and specialty selling. Emphasis is placed upon mastering and applying all fundamentals of selling. Preparation for and execution of sales demonstrations required.
Prerequisite: T-BUS 232.
- T-BUS 235 Business Management** 3 0 3
An analysis of the underlying theory and principle of sound business organization and management including mechanisms and methods required for administrative and managerial control.
Prerequisite: None.
- T-BUS 239 Marketing** 5 0 5
A general survey of the field of marketing, with a detailed study of the function, policies, and institutions involved in the marketing process.
Prerequisite: None.

T-BUS 243 Advertising

3 2 4

The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.

Prerequisite: None.

T-BUS 245 Retailing

3 0 3

A study of the role of retailing in the economy, including development of present retail structure, functions performed, principles governing effective operation, and managerial problems resulting from current economic and social trends.

Prerequisite: None.

T-BUS 247 Business Insurance

3 0 3

A presentation of the basic principles of risk insurance and their application. A survey of the various types of insurance is included.

Prerequisite: None.

T-BUS 263 Payroll Taxes

3 0 3

An examination of Federal, state, and local laws as they pertain to payroll taxes. Includes a review of the record-keeping needs to meet the information demand of the taxing authority. Also gives insight into the different payroll systems and accounting procedures used in relation to payroll taxes.

T-BUS 269 Auditing

4 2 5

Concepts and objectives of conducting audits. Audit plans and responsibility. Procedures used in writing audit reports.

Prerequisite: T-BUS 224.

T-BUS 271 Office Management

3 2 4

Presents the fundamental principles of office management. Emphasis on the role of the office management including its functions, office automation, planning, controlling, organizing to solve office problems.

Prerequisite: None.

BUS 1103 Small Business Operation

3 0 3

An introduction to the business world, problems of small business operation, business forms and records, financial problems, ordering and inventorying, layout of equipment, and employer-employee relations.

Prerequisite: None.

CHEMISTRY

T-CHM 101 Chemistry I

3 6 6

Study of the physical and chemical properties of substances, chemical changes, elements, compounds, gases, chemical combinations; weights and measurements; theory of metals; acids, bases, salts, solvents, solutions and emulsions. In addition, study of electrolytes, electrolysis and chemical mathematics.

Prerequisite: T-MAT 100A.

T-CHM 106 Chemistry II

3 4 5

General principles and theories of organic chemistry. Preparations, formulas, and properties of the most important organic compounds such as: saturated and unsaturated hydrocarbons; aromatic hydrocarbons; alcohols and phenols; ethers; carbonyl compounds; carboxylic acids; carbohydrates and proteins. Also a brief description of synthetic compounds of commercial value in addition to the main vitamins, antibiotics, and hormones.

Prerequisite: T-CHM 101.

nectors, and a combination of these. Practical design problems will be stressed with analytical verification where applicable. Visualization shall be stressed on every problem.

Prerequisite: T-DFT 101.

T-DFT 211 Mechanisms 3 2 4

Mathematical and drafting room solutions of problems involving the principles of machine elements. Study of motions of linkages, velocities and acceleration of points within a link mechanism; layout methods for designing cams, belts, pulleys, gears, and gear trains.

Prerequisites: T-DFT 201, T-MAT 103, T-PHY 102.

T-DFT 213 Die Design 2 4 4

The study of piercing, blanking, bending and drawing dies. The student will design both simple and multiple stage dies employing layout and detail drafting.

Prerequisites: T-DFT 101; T-DFT 102; T-DFT 103; T-DFT 201.

DFT 1101 Automotive Schematics and Diagrams 1 3 2

Interpretations and reading of manufacturers' blueprints, schematic drawings, pictorials, charts, wiring diagrams, and service specifications. Basic principals of lines, views, dimensioning, and notes will be covered. Sketching will be introduced. All problems as applied to automotive trade.

Prerequisite: None.

DFT 1121 Drafting 0 6 2

An introductory course in drafting for student needing a knowledge of drawing principles and practices for reading and describing objects in the graphic language. The student is expected to gain basic skills in drawings with instruments, lettering, geometrical constructions, freehand sketching and describing objects orthographically with principal views. Freehand sketching and orthographic reading are to be emphasized.

Prerequisite: None.

DFT 1122 Drafting 0 6 2

The student continues the study of orthographic projection with applications to orthographic instrument drawing. Dimensioning procedures and practices are emphasized and the student is introduced to the "working drawing". Methods of describing complex objects with auxiliary views and/or sections and conventions are taught.

Prerequisite: DFT 1121.

DFT 1123 Drafting 0 6 2

A further study of machine shop working drawings with emphasis on problems concerning precision and limit dimensioning. Methods of fastening materials and fasteners; keys, metal fasteners, springs, and welding. Symbols will be studied and drawings will be made involving the types of fastening devices and methods. Working drawings will cover gears, cam power trains, pulleys, belting, and drawings will be made involving the mechanisms.

Prerequisites: DFT 1121, DFT 1122.

ECONOMICS

T-ECO 102 Economics 3 0 3

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large.

Prerequisite: None.

T-ECO 104 Economics

3 0 3

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems.

Prerequisite: T-ECO 102.

ELECTRICITY**T-ELC 101 Fundamentals of Electricity**

5 4 7

Elementary principles of electricity including: Basic electric units, Ohm's Law, Kirchhoff's Law, network theorems, magnetics, basic electrical measuring instruments, inductance, and capacitance is studied.

Prerequisite: None.

T-ELC 102 Fundamentals of Electricity (AC)

5 4 7

Sine wave analysis, inductive and capacitive networks series and parallel, basic diode power supply analysis are studied.

Prerequisite: T-ELC 101.

ELC 1112A Direct and Alternating Current

2 4 3

A study of the electrical structure of matter and the electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. A study of direct current circuits and the sources of direct current voltage potentials. Fundamentals concepts of alternating current flow and analysis of alternating current circuits.

Prerequisite: MAT 1115.

ELC 1112B Direct and Alternating Current

3 9 6

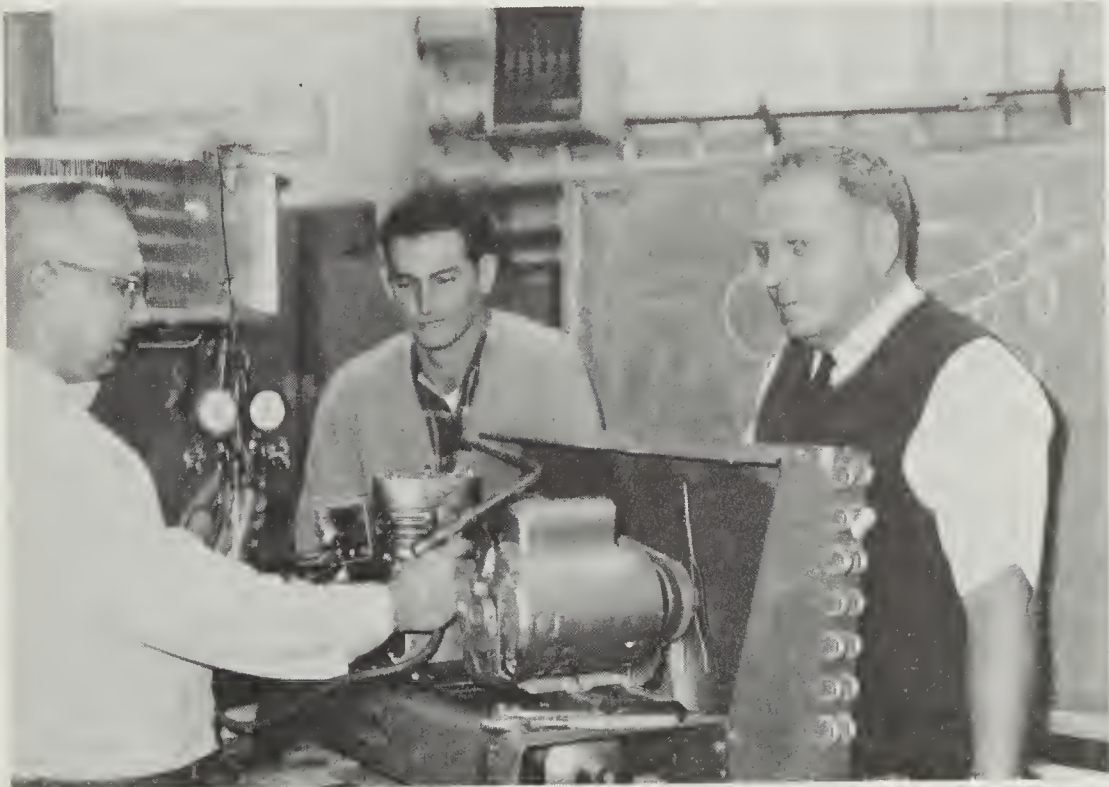
A continuation of 1112A.

Prerequisite: ELC 1112A.

ELECTROMECHANICAL**EMS 1101 Industrial Maintenance Shop Practice**

2 6 4

An introduction to the nature of the work required of an industrial maintenance mechanic and his role in industry. This course will deal with



identification, care, and use of basic hand tools used by a maintenance mechanic, portable power tools, and measuring devices. Special tools and holding devices will be produced. Methods of bending and forming industrial pipe, tubing, and conduit will be learned along with threading operations. Benchwork such as filing, shaping, and forming metal shapes will be practiced. Good housekeeping and safety shop practices will be stressed.

Prerequisite: None.

EMS 1102 Electromechanical Systems I 3 12 7

An introduction to electromechanical devices and systems including motors, switches, transformers, breakers, starting controls, and electrical circuitry. The student will work with manufacturers' specifications and schematics in building mock-ups. Measuring and testing equipment common to electromechanical equipment will be studied.

Prerequisite: ELC 1112A.

EMS 1103 Electromechanical Systems II 3 12 7

A continuation study of electromechanical devices and systems with special emphasis on pressure and vacuum gages, pumps, blowers, control signals and devices, electromechanical valves, and electronic mechanisms that automatically operate machinery. Mock-ups will be built to study the different types of devices and systems. Measuring and testing equipment common to electromechanical equipment will be stressed.

Prerequisite: EMS 1102.

EMS 1110 Electrical Systems Design 2 4 3

Students will be assigned an electrical design project whereby they must draw the total layout to scale using proper drawing techniques and symbols. Amount, size, and cost of all materials including labor will be calculated, and a total bill of material will be developed. Profit or lost will be figured.

EMS 1299 Cooperative Occupational Education 3 40 7

This is an actual supervised work experience within various phases of industrial maintenance during the interim summer quarter between the first and second year.

ELECTRONICS

T-ELN 101 Electronic Instruments and Measurements 1 4 3

A study of basic electronic instruments, their theory of operation, function, tolerances, and calibration. Both service and laboratory instruments shall be studied. Laboratory experience will provide application of each type instrument studied.

T-ELN 105 Control Devices 5 6 7

A study in depth of the electrical characteristics of vacuum tubes and transistors. Basic parameters and applications of each type device to the three configurations of a three terminal two port systems will be included.

Prerequisite: T-ELC 102.

T-ELN 205 Applications of Vacuum Tubes and Transistors 5 6 7

Practical applications of vacuum tubes and transistors to basic audio amplifiers, radio frequency amplifiers, detectors, modulators and oscillators.

Prerequisite: T-ELN 105.

T-ELN 210 Semiconductor Circuit Analysis 5 3 6

A study in some depth of the analysis and design of transistor circuits. Network theorems and equivalent circuits are used extensively in evaluating total circuit performance. Device peculiarities and limitations pertinent to reliable operations are considered. H. Y. Z. and T. parameters are employed as well as signal-flow graphs.

Prerequisite: T-ELN 105.

T-ELN 214 Wave Shaping and Pulse Circuits 2 3 3
 Broadband amplifiers, magnetic amplifiers, multivibrators, wave shaping techniques, chopper amplifiers, clipper and clamper circuits.
 Prerequisites: T-ELN 105, T-MAT 102.

T-ELN 215 Wave Shaping and Pulse Circuits 2 3 3
 Pulse techniques, diode switches, gates, step-counters, restorers and other specific circuits which function as switches.
 Prerequisite: T-ELN 214.

T-ELN 220 Electronic Systems 5 4 7
 A block diagram course investigating numerous electronic systems. Modules or blocks of various circuits already studied are arranged in various manners to produce complex electronic systems. Systems will be explained and reduced to functions and then to block diagrams. AM, FM, and Single Sideband transmitters and receivers, multiplexing, TV transmitters and receivers, pulse-modulated systems, computers, telemetry, navigational systems, sonar and radar will be considered.
 Corequisite: T-ELN 215.

T-ELN 227 UHF & Microwave 3 3 4
 A study of UHF and VHF components, circuits, and measurement techniques. The use of distributed constant elements, waveguides and coaxial cables, microwave links, high frequency oscillators, magnetrons, klystron traveling wave tubes. An introduction to the use of the Smith chart.
 Prerequisite: T-ELN 214.

T-ELN 231A Electronic Communication 0 3 1
 A study of basic electronics and application of electronics. Covers fundamentals of radio receivers, transmitters, radiotelephone, and all information required for passing FCC tests for various classes.
 Prerequisite: T-ELN 105.

T-ELN 231B Electronic Communication 0 4 2
 Continuation of T-ELN 231A consisting of question and answer sessions.
 Prerequisite: T-ELN 231A.

ENGLISH

T-ENG 101 Grammar 3 0 3
 Designed to aid the student in the improvement of self-expression through a reasonable understanding of the mechanics of English—grammar, diction, spelling, and punctuation. Practice in dictionary use and vocabulary building encourages wider knowledge and ability to write and speak with precision in daily activities.
 Prerequisite: None.

T-ENG 101A Grammar 3 0 3
 A course to include the study of grammar—nouns, pronouns, verbs, and sentence structure; the study of dictionary use; and the study of vocabulary; all of these to promote more accurate and precise communication in daily activities.
 Prerequisite: None.

T-ENG 101B Grammar 3 0 3
 A continuing explanation of the grammar of English which gives special attention to adjectives, adverbs, conjunctions, prepositions, capitalization, abbreviations, and figures. Attention to vocabulary building and spelling also will be included.
 Prerequisite: T-ENG 101A.

T-ENG 102 Composition 3 0 3
 To improve and stimulate accurate written expression through practice by the student. Special emphasis on the sentence, paragraph and longer

compositions will be given. Practice in organizing, outlining, and format is included. The purpose of this course is to enable the student to write with skill and meaning whenever necessary in business or industry.

Prerequisite: T-ENG 101 or 101A and 101B.

T-ENG 103 Report Writing 3 0 3

A course to illustrate the need and structure of the various types of reports. This study will include form necessary for reports, needed elements of reports, methods of collecting materials, and occasions calling for reports. An original, full-length report will be required of each student at the end of the quarter.

Prerequisite: T-ENG 102.

T-ENG 204 Oral Communication 3 0 3

A study of the necessary elements which make up the act of communication, whether it be person to person or person to group. Emphasis is placed on the importance of voice, diction, gestures, and attitude. Attention is given to listening skills as well as speaking efficiency. Adequate practice through speech making in class is provided.

Prerequisite: T-ENG 102.

T-ENG 206 Business Communications 3 0 3

Practice is given in the techniques required in writing successful business communications. Various types of letters are studied with emphasis on language and purpose of each. All assigned letters must be typewritten using appropriate form. Some examination of informal business communication is included.

Prerequisite: T-ENG 102.

ENG 1101 Reading Improvement 3 0 3

A course designed to aid student in the comprehension of various kinds of printed material. Help is given in vocabulary building and summarizing what has been read.

ENG 1102 Communicative Skills 3 0 3

A course including both written and oral communications necessary in everyday activities. Practices in writing directions, letters of inquiry, orders, and bills is provided. Oral skills in telephone use, explanations, interview situations, and informal speech-making are practiced.

***ENG 111E Composition** 3 0 3

A study of grammar, punctuation, spelling, and mechanics principles and methods of composition; study of essays and other selected readings as a basis for constant practice in self-expression. Regular themes, reports and conferences. Required outside reading.

***ENG 112E Composition**

Composition, continued; a study of selected masterpieces representing basic types of literature; training in the research paper; required outside reading.

***ENG 221E Major English Writers** 3 0 3

A study of major writers from Chaucer to Johnson in their cultural and historical setting, with emphasis on appreciation and interpretation of their principal works.

Prerequisite: English 111E-1112E.

GEOLOGY

***GEO 111E Physical Geology** 3 2 4

A study of earth materials and landforms and the processes at work upon and within the earth. In the laboratory, emphasis will be placed on the

* Indicates the college credit courses that will be offered by Campbell College on the campus of Central Carolina Technical Institute.

identification of the common minerals and basic rock types and the use of topographic maps. A partial list of topics includes: geologic time, igneous, sedimentary and metamorphic geology; geologic structures; the action of wind, water, and glaciers.

***GEO 112E Historical Geology** 3 2 4

A history of the earth concerned with the changes in the earth's crust and the life that has existed upon that crust. Laboratory work will include a study of fossils and an introduction to geologic maps.

Prerequisite: GEO 111E.

* Indicates the college credit courses that will be offered by Campbell College on the campus of Central Carolina Technical Institute.

HEALTH

***HEA 111E Health** 2 0 2

A study of vital phenomena and their application to the human organism. Emphasis will include fundamental biological facts of human anatomy and physiology; personal and community health, education for family living, health hazards, and mental health.

HISTORY

***HIS 111E Western Civilization** 3 0 3

A survey of Western Civilization to the present, this course gives attention to the origins of civilization and to relations between the West and non-Western areas of the world. History 111-112 is required of all candidates for a degree.

***HIS 112E Western Civilization** 3 0 3

A continuation of History 111.

* Indicates the college credit courses that will be offered by Campbell College on the campus of Central Carolina Technical Institute.



HORTICULTURE

T-HOR 150 General Horticulture 2 4 4

A course dealing with tree fruits, small fruits, vegetables, lawn grasses and flowers and the application of plant science fundamentals to horticultural practices on these crops.

Prerequisite: T-AGR 170.

MATHEMATICS

T-MAT 100 Fundamentals of Technical Mathematics 5 4 7

This is a pre-technical math course in which historical concepts of numbers, counting, addition, subtraction, multiplication, exponents and axiomatic principles of math are developed. Problem solving using symbolism is studied. Introduction to graphical understanding of numbers in geometry or trigonometry are covered. Development of exponential laws, uses of slide rules, inequalities versus equalities, collection of like quantities and products of quantities are also studied.

T-MAT 100A Fundamentals of Technical Mathematics 5 0 5

The course is designed for students in the agricultural and medical programs. Development of the number system is emphasized as well as the explanation of all laws in the field. Major emphasis is applied in the following areas: Metric and British systems of measurement, ratio and proportions, percentages, mixtures and solutions, as well as elementary equations in algebra. The application of such topics is constantly impressed upon the student.

Prerequisite: None.

T-MAT 101 Technical Mathematics 5 0 5

The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.

Prerequisite: T-MAT 100 or satisfactory evidence of proficiency.

T-MAT 102 Technical Mathematics 5 0 5

A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth.

Prerequisite: T-MAT 101.

T-MAT 103 Technical Mathematics 5 0 5

The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Applications of these concepts to practical situations are stressed.

Prerequisite: T-MAT 102.

T-MAT 110 Business Mathematics 5 0 5

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price making, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

Prerequisite: None.

T-MAT 201 Technical Mathematics 5 0 5

A continuation of T-MAT 103. More advanced concepts of differentiation and integration are considered. Included are graphs and derivatives of the

trigonometric functions, exponential and logarithmic differentiation and integration, advanced integration techniques, polar equations, parametric equations, and Fourier series.

Prerequisite: T-MAT-103.

T-MAT 214 Statistics 3 4 5

The theory of statistics and its application in modern business. Kinds of regularity that exist among random fluctuations. Experience in associating and using mathematical models to interpret physical phenomena and predicting the outcomes of experiments related to practical business problems.

Prerequisite: None.

MAT 1101 Fundamentals of Mathematics 5 0 5

Practical number theory. Analysis of basic operations: addition, subtraction, multiplication, and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

Prerequisite: None.

MAT 1102 Mathematics: Algebra 5 0 5

Basic concepts and operations of algebra; historical background of our base-10 number system; algebraic operations: addition, subtraction, multiplication, and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by: addition and subtraction, substitution, graphing, exponents, logarithms, tables and interpolation.

MAT 1103 Geometry 5 0 5

Fundamental properties and definitions; plane and solid geometric figures; selected general theorems; geometric construction of lines, angles, and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations.

Prerequisite: None.

MAT 1115 Electrical Mathematics 5 0 5

A study of fundamental concepts of algebra; solution of first order equations, use of letters and signs, grouping, factoring, exponents, ratios and proportions; solution of equations; algebraically and graphically; a study of logarithms and use of tables; an introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current.

Prerequisite: MAT 1101.

MAT 1122 Electrical Lineman Mathematics 3 0 3

This course provides practical problem material for electrical students with an introduction to algebraic formulas, plane geometry, and elementary trigonometry. Emphasis is placed on applications of problems which are arranged in the natural order of dependence of one topic on the next.

MAT 1123 Machinist Mathematics 5 0 5

Gear ratio, lead screw and indexing problems with emphasis on application to the machine shop. Practical applications and problems in geometric propositions and trigonometric relations to shop problems; introduction to compound angle problems.

Prerequisite: None.

***MAT 111E College Algebra** 3 0 3

A study is made of sets, properties of real numbers, functions and relations of one variable, factoring, fractions, exponents and radicals, solution of equations in one variable, inequalities, graphs of functions, systems of equations, sequences, variation and proportion, binomial theorem, and mathematical induction.

***MAT 112E Elementary Functions** 3 0 3
Circular, logarithmic, exponential and polynomial functions, radian measures, use of tables, linear interpolation, vectors, and complex numbers.

* Indicates the college credit courses that will be offered by Campbell College on the campus of Central Carolina Technical Institute.

MECHANICAL

T-MEC 101 Machine Processes 2 4 4

An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

Prerequisite: None.

T-MEC 102 Machine Processes 2 4 4

Advanced operations on lathe, drilling, boring and reaming machines. Milling machine theory and practice. Thorough study of the types of milling machines, cutters, jig and fixtures devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed.

Prerequisite: T-MEC 101.

T-MEC 112 Manufacturing Processes 3 3 4

The study of machining methods as they relate to metal machining industries. Detailed process sheets will be written and time standards set by standard data.

Prerequisites: T-MEC 101; T-MEC 116; T-MEC 210.

T-MEC 116 Engineering Materials 3 3 4

Study and testing of the properties and use of metals, plastics, woods, ceramics, load and strain measurements, behavior of materials under load, qualities other than strength. Control of the properties of the materials.

T-MEC 205 Strength of Materials 3 2 4

Study of principles and analysis of stresses which occur within machine and structure elements subjected to various types of loads such as static, impact, varying and dynamic. Analyses of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns and machine components.

Prerequisites: T-PHY 106; T-MAT 102.

T-MEC 208 Machine Design I 3 3 4

A study of factors affecting the design of machines. Applications of the principles of mechanics, properties of materials, manufacturing processes and economics of production fundamental to the design of machine components. Empirical and theoretical equations, practical considerations, and design procedures are included.

Prerequisite: T-MEC 205.

T-MEC 209 Machine Design II 3 3 4

Emphasis on the design of machines and/or their sub-assemblies. Selection of machine components through the use of manufacturers catalogs, standards, and handbooks. Stress analysis and design of physical dimensions for advanced machine components covered.

Prerequisite: T-MEC 208.

T-MEC 210 Physical Metallurgy 3 3 4

Introductory course in metallurgy, a basic study of the properties of metals and alloys. Analysis of the structure of metals and alloys, atomic

structure, nuclear structure, and nuclear reactions. Solid (crystalline) structures, methods of designating crystal planes; liquid and vapor phases; phase diagrams; and alloy systems.

Prerequisite: T-PHY 101.

T-MEC 211 Physical Metallurgy 3 3 4

Properties of metals and alloys, the reactions of metals, diffusion, carburizing, metal bonding and homogenization; recrystallization and grain growth, age hardening, nitriding, internal oxidation; heat treatment of steel; laboratory experiments and demonstrations.

Prerequisite: T-MEC 210.

T-MEC 237 Control Systems 2 4 4

Hydraulic, pneumatic, mechanical, electrical, and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, applications and their utilization in industrial processes.

Prerequisites: T-PHY 102; T-ELC 101; T-ELN 101.

MEC 1101 Machine Tool Theory and Practice 3 9 6

An introduction to the basic machine tool operations; namely, turning, sawing, drilling, grinding, and milling. Identification, care, and use of precision hand and measuring tools. Layout and processes of the engine lathe, drill press, grinding (off-hand), power saw, and the milling machine will be covered both in theory and practice.

Prerequisite: None.

MEC 1102 Machine Tool Theory and Practice 3 9 6

Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine, and shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all of the operations, tools, and procedures thus far used and those to be stressed throughout the course.

Prerequisite: MEC 1101.

MEC 1103 Machine Tool Theory and Practice 3 9 6

Advanced work on the engine lathe, turning, boring, and threading machines, grinders, milling machine and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting, and measuring of spur, helical, and worm gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gauges, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder.

Prerequisite: MEC 1102.

MEC 1104 Machine Tool Theory and Practice: Special Tools 1 6 3

The student will study the special machine tools designed for high production and automatic operations. Emphasis will be stressed on working to closer tolerances and the application of special tooling used in the manufacturing process. The numerically controlled machine tool will be introduced and class projects will be produced on a numerically controlled milling machine.

MEC 1112 Machine Shop 2 4 3

An introduction to the machine shop as related to the automotive trade, deals primarily with the identification, care, and use of basic machine shop tools and off-hand grinding of drill bits and automotive shoptools. Elementary layout and practice jobs using the lathe, drill press, and the milling machine will be introduced.

Prerequisite: None.

MEC 1115 Treatment of Ferrous Metals 3 3 4

Investigates the properties of ferrous metals and tests to determine their uses. Instructions will include some chemical metallurgy to provide a background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, heat treatments for steel, surface treatments, alloy of special steel, classification of steels, and cast iron will be topics for study.

Prerequisite: None.

MEC 1116 Treatment of Non-Ferrous Metals 3 3 4

The student investigates the properties and characteristics of non-ferrous metals and strength tests to determine their uses. The non-ferrous metals: heavy metals (brass, bronze, lead), light metals (aluminum and magnesium), and copper and its alloys are studied. Basic welding used for joining non-ferrous metals will be introduced.

Prerequisite: None.

MEC 1117 Treatment of Metals 3 3 4

A study of the properties of ferrous and non-ferrous metals, alloys, castings, and heat treating as applied to the maintenance mechanics needs.

Prerequisite: None.

MEC 1126 Heat Treating 1 4 2

This course covers the theory and practice of heat treatments of ferrous and nonferrous metals with special emphasis on heat treatment as related to gages, tooling, and dies.

Prerequisite: Course work in ferrous and non-ferrous metals of equivalent work experience.

MEC 1139 Basic Hydraulics 2 6 4

The study of hydraulic systems as applied to maintenance and repair of such devices. Mock-ups will be built of pneumatic and hydraulic systems including the different types of valves and controls. Measuring and testing equipment used in pneumatic and hydraulic systems will be studied. The student will learn how to detect leaks, repair, and place back in operation the common pneumatic and hydraulic control mechanisms.

Prerequisites: PHY 1101, EMS 1102.

MEC 1151 Tool Making: Jigs and Fixtures I 1 12 5

The student will repair and construct jigs and fixtures using previous knowledge of machine tool operation, layout, fitting, and assembling parts.

Prerequisite: MEC 1104.

MEC 1151A Tool Making: Jigs and Fixtures II 1 6 3

The students will design and construct jigs and fixtures for given machine shop parts.

Prerequisite: MEC 1104 and MEC 1151.

MEC 1152 Tool Making: Gages and Special Tools 2 9 5

This course is the third in a series of tool making courses. Additional learning experiences in the construction of jigs and fixtures will be covered with special emphasis on making special gages, measuring devices, and special hand tools.

Prerequisite: MEC 1151A.

MEC 1154 Die Making I: Introduction 2 9 5

The tool maker works very closely with the die maker and in some small plants, their duties overlap. For this reason, it is felt that instruction in repair and manufacture of simple dies would be in order. This introductory course would cover primarily the basic principles of die making and maintenance and repair of simple, single-stage, shearing and punching dies.

Prerequisites: MEC 1104 and MEC 1151.

MEC 1155 Die Making II

2 12 6

This course is the second in a series of die making courses. The student will construct single-stage shearing and punching dies. The importance of quality workmanship as related to the competitive manufacturing system and factors constituting product cost will be stressed.

Prerequisite: MEC 1154.

MEC 1156 Die Making III

1 12 5

The theory and design of progressive dies will be studied. The student will be given instruction in the location of pilots, the progressive cam stages, grinding operations, and blank development. The student will machine, assemble, and set up a conventional progressive die involving three or more stages. Further theory and practice is given in plastics molds.

Prerequisite: MEC 1155.

MEC 1158 Introduction to Plastic Molding

2 9 5

Due to the expanding use of plastics, the need for mold making has greatly increased. This course is designed to acquaint the student with the design and construction of simple molds, differences between molds and dies, surface finishes, closures, gates and runners, and ejection methods. Methods of cooling will also be discussed and the student will build a simple mold to prescribed accuracy and finish.

Prerequisite: None.

MEC 1159 Blueprint Reading and Inspection

2 2 3

This course is to enable the toolmaking student to correctly interpret the more complicated blueprints. Methods of machining complicated parts will be discussed and lab practice for inspection of gages and special tools will be held.

MUSIC***MUS 131E Music Appreciation**

3 0 3

An introduction to music through an understanding of the principles of form and the elements of music. Various styles and types of vocal and instrumental works are studied.

PHYSICAL EDUCATION***PE 111E Physical Education**

0 2 1

***PE 112E Physical Education**

0 2 1

These courses (111E and 112E) will consist of selections from the following activities for men and women: Archery—Badminton—Physical Conditioning—Tennis—Volleyball—Bowling—Swimming. A balanced selection of team and individual activities are recommended. Exact offerings will be announced prior to registration.

PHYSICS**T-PHY 101 Physics: Properties of Matter**

3 2 4

A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course.

Prerequisite: T-MAT 100.

* Indicates the college credit courses that will be offered by Campbell College on the campus of Central Carolina Technical Institute.

T-PHY 102 Physics—Statics, Forces, and Dynamics 3 2 4

Major areas covered in this course are work, energy, and power. Instruction includes such topics as statics, forces, center of gravity and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas.

Prerequisites: T-MAT 100, T-MAT 101.

T-PHY 103 Physics: Electricity 3 2 4

Basic theories of electricity, types of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course.

Prerequisite: T-MAT 102.

T-PHY 104 Physics 3 2 4

A survey of the concepts involving wave motion leads to a study of sound, its generation, transmission and detection. The principles of wave motion also serve as an introduction to a study of light, illumination and the principles involved in optical instruments. Application is stressed throughout.

Prerequisite: T-MAT 102.

T-PHY 106 Applied Mechanics 5 0 5

Concepts and principles of statics and dynamics. Parallel concurrent and non-concurrent force systems in coplanar and noncoplanar situations. Concepts of centroids and center of gravity, moments of inertia, fundamentals of kinetics, and kinematics of velocity and motion.

Prerequisites: T-MAT 101, T-PHY 102.

PHY 1101 Applied Science 3 2 4

An introduction to physical principles and their application in industry. Topics in this course include measurement; properties of solids, liquids, and gases; basic electrical principles.

Prerequisite: None.

PHY 1102 Applied Science 3 2 4

The second in a series of two courses of applied physical principles. Topics introduced in this course are heat and thermometry, and principles of force, motion, work, energy, and power.

Prerequisite: PHY 1101.

POLICE SCIENCE

T-PSC 101 Introduction to Law Enforcement 5 0 5

A general course designed to familiarize the student with a philosophy and history of law enforcement, including its legal limitations in a democratic republic, a survey of the primary duties and responsibilities of the various law enforcement agencies, a delineation of the basic processes of justice, an evaluation of law enforcement's current position, and an orientation relative to law enforcement as a vocation.

Prerequisite: None.

T-PSC 110 Police Role in Crime and Delinquency 5 0 5

The study primarily concerned with scientific efforts to understand crime and to understand man in relation to crime phenomena. It deals with those definitions and formulations of crime and criminals upon which an adaptation system of criminology must be based. It examines the law as the basic framework within which social deviations of a peculiar character assume their functions as criminal acts and those broad principles upon which a science of criminology must rest.

Prerequisite: None.

T-PSC 115 Criminal Law 5 0 5

Designed to present a basic concept of criminal law and create an appreciation of the rules under which one lives in our system of government.

Prerequisite: None.

T-PSC 201 Traffic Planning and Management 4 2 5

A study which covers the history of the traffic enforcement problem and gives an overview of the problem as it exists today. Attention will be given to the 3 E's and legislation, the organization of the traffic unit, the responsibilities to the traffic function of the various units within the law enforcement agency, enforcement tactics, evaluation of the traffic program effectiveness, and the allocation of men and materials.

Prerequisite: None.

T-PSC 205 Criminal Evidence 5 0 5

Instruction covers the kinds and degrees of evidence and the rules governing the admissibility of evidence in court.

Prerequisite: T-PSC 115.

T-PSC 210 Criminal Investigation 5 0 5

This course introduced the student to fundamentals of investigation; crime scene search; recording, collection and preservation of evidence; sources of information; interview and interrogation; case preparation and court presentation; and the investigation of specific offenses such as arson, narcotics, sex, larceny, burglary, robbery and homicide.

Prerequisite: Admission to the program and permission of the instructor-coordinator.

T-PSC 211 Introduction to Criminalistics 4 3 5

Continuation of the study of criminal investigation including a general survey of the methods and techniques used in modern scientific investigation of crime, with emphasis upon the practical use of these methods by the students. Laboratory techniques will be demonstrated and the student will participate in actual use of the scientific equipment.

Prerequisite: Admission to the program; permission of instructor-coordinator; satisfactory completion of T-PSC 210.

T-PSC 220 Police Organization & Administration I 5 0 5

Introduction to principles of organization and administration, discussion of the service functions; e.g., personnel management, police management, training, communications, records, property maintenance and miscellaneous services.

Prerequisite: None.

T-PSC 225 Criminal Procedure 5 0 5

This course is designed to provide the student with a review of court systems; procedures from incident to final disposition; principles of constitutional, federal, state and civil laws as they apply to and affect law enforcement.

Prerequisites: T-PSC 205, T-PSC 210.

POLITICAL SCIENCE

T-POL 102 Government—National 5 0 5

English and colonial background, the articles of confederation and the framing of the federal constitution. The nature of the federal union; state rights; federal powers, political parties. The general organization and functioning of the national government.

Prerequisite: None.

T-POL 103 Government—State and Local 5 0 5

A study of state and local government, state-federal interrelationships, the functions and prerogatives of the branches. Problems of administration,

legal procedures, law enforcement, police power, taxation, revenues, and appropriations. Special attention will be given to North Carolina.

Prerequisite: T-POL 102.

T-POL 201 United States Government 3 0 3

A study of government with emphasis on basic concepts, structure, powers, procedures and problems.

Prerequisite: None.

PRACTICAL NURSE EDUCATION

PNE 1101 Fundamentals of Practical Nursing 6 4 2 8

Interpretation of the role of the practical nurse student and basic knowledge to be used in performing nursing. Philosophy and objectives of practical nursing in the technical institute setting. Using adequate study methods and materials. Beginning knowledge of interpersonal relationships in nursing. Principles basic to nursing practice. Body mechanics for nurse and patient. Sterilization techniques and disinfection methods. Principles of medical and surgical asepsis. Uses of hospital equipment. Techniques in daily hygienic patient care. Spoken and written communications for nurses. Laboratory practice in simple skills and hygienic care of patients.

PNE 1102 Nutrition and Diet Therapy 2 0 0 2

Designed to give knowledge of the basic principles of nutrition. Functions and sources of nutrients. The mechanics of digestion, absorption, and metabolism of nutrients. Principles of meal planning, nutritional requirements for all age groups modified by religious, cultural, social, and psychological aspects.

PNE 1103 Anatomy and Physiology 4 0 0 4

A thorough study of the general plan of the body and the nine systems; nervous, endocrine, skeletal, muscular, circulatory, digestive, respiratory, urinary, male and female reproductive systems. Designed for understanding of how the body controls its functions, how the body stands erect and moves, how the body distributes food and oxygen and removes waste, how the body provides for reproduction.

PNE 1104 Growth and Development 3 0 0 3

Designed to show the individual as a member of a family and community. Normal development from birth to old age. Influences of the environment. Physical, mental, and personality changes with age. Community responsibilities and resources for young and old. Guest speakers from community agencies.

PNE 1105 Medical-Surgical I: Introduction 5 0 0 5

Planned to give beginning understanding of the nursing care of and common problems caused by illness. Emotional reactions caused by illness and hospitalization. Nurse-patient relationships. Fundamental processes of illness and nursing care. Diagnostic tests. The nursing needs of the cancer patient and other selected medical patients. Nursing care of the surgical patient. Introduction to rehabilitation. Modification of diet for disease conditions.

PNE 1106 Medical-Surgical II 5 0 0 5

Designed to develop knowledge of common disorders of body systems, the nursing care, socio-psychological implications. Includes disorders of the cardiovascular, gastro-intestinal, respiratory and integumentary systems. Disorders of the eye, ear, nose, and throat.

Prerequisite: PNE 1105.

PNE 1107 Medical-Surgical III 6 0 0 6

Continuation of study of disorders of the body systems. Includes Musculo-Skeletal, Endocrine, and Nervous systems. Urological disorders and

nursing care. First aid. Advanced nursing ethics, medico-legal aspects of practical nursing, organizations for the graduate practical nurse.

Prerequisite: PNE 1106.

PNE 1108 Pharmacology I 3 2 0 4

Review of mathematics as used by nurses. Development of the skill of giving oral medications. Knowledge of drug sources, methods of preparation and storage. The classification of drugs by use and by drug content.

PNE 1109 Pharmacology II 2 0 0 2

Development of a thorough knowledge of the equipment and sterile techniques used in preparing and giving injections. Administration of drugs by inhalation, topical application. Insulin therapy. Home drug preparation and storage.

Prerequisite: PNE 1108.

PNE 1110 Pediatrics I: Nursing of Children 2 2 0 2

Understanding of the scope and aims of modern nursing of children. Difference in the nursing care of children from adults. Methods of answering the needs of the hospitalized child and his parents. Common disorders of children and their implications for nursing care.

Prerequisite: PNE 1104.

PNE 1111 Pediatrics II: Nursing of Children 2 0 0 2

A continuation in more depth of Pediatrics I: Nursing of Children.

Prerequisite: PNE 1110.

PNE 1112 Maternity Nursing: Obstetrics 3 0 0 3

Presentation of modern aspects of maternity nursing with emphasis on normal obstetrics. Detailed presentation of material on nursing care during antepartum, labor, and postpartum periods. Care of the newborn baby and methods of teaching new mothers. Emphasis is to provide better and safer care for the expectant mother and her baby.

Prerequisites: PNE 1101 and PNE 1103.



PNE 1113 Clinical Experience I 0 0 24 8

Beginning experience in a general hospital under supervision of clinical teachers. Opportunities for practicing skills learned in laboratory practice. Emphasis on basic hygienic care for ambulatory and bed patients. Practice in charting nurses' notes and making observations with the use of testing materials and instruments. Beginning opportunities to develop concepts needed for caring for patients as a part of a nursing team.

Prerequisite: PNE 1101.

PNE 1114 Clinical Experience II 0 0 24 8

Further experience in the practice of nursing skills. Continued experiences in the basic areas of medical-surgical nursing, pediatric nursing or obstetrical nursing. Experience in giving oral and topical medications under the direction of clinical teacher. Emphasis on observation of signs and symptoms and taking part in making nursing judgments in team conference. Isolation techniques and practice, oxygen therapy.

Prerequisite: PNE 1113.

PNE 1115 Clinical Experience III 0 0 24 8

Student learns her role as an assistant to the professional nurse in caring for the more seriously ill patient. Continued experience in the basic areas of medical-surgical nursing, pediatric nursing or obstetrical nursing under supervision of clinical teachers. Practice in giving injections under the direct supervision of a clinical teacher. Experience in more complicated nursing treatments. Organization for patient care for groups of patients.

Prerequisite: PNE 1114.

PSYCHOLOGY

T-PSY 102 General Psychology 5 0 5

A study of the various fields of psychology; the developmental process; motivation; emotion; frustration and adjustment; mental health; attention and percentage; problems of group living. Attention is given to applications of these topics to problems of study, self-understanding and adjustment to the demands of society.

Prerequisite: None.

T-PSY 103 Adolescent Psychology 5 0 5

A study of the nature and source of the problems of adolescents in western culture; physical, emotional, social, intellectual and personality development of adolescents.

Prerequisite: T-PSY 102.

T-PSY 206 Applied Psychology 3 0 3

A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings, and emotions are considered with particular reference to on-the-job problems. Other topics investigated are: employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community.

Prerequisite: None.

PSY 1101 Human Relations 2 0 2

A study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.

PSY 1101A Human Relations 3 0 3

A continuation of PSY 1101 with special emphasis on professional ethics.

RADIO-TV BROADCASTING

T-RTV 101 Introduction to Broadcasting 5 0 5

An overview of the entire field of radio broadcasting, including the history of the origin and development of the broadcasting industry in the U.S., the various dimensions of broadcasting, station organization and procedures, and factors influencing broadcasting from social, political, and economic areas. Also technical advances and interrelationships between the media.

Prerequisite: None.

T-RTV 102 Newsgathering-Writing-Sports 3 4 5

An introduction to the field of broadcast journalism with special emphasis placed upon gathering, writing, editing and processing of news and specialty programs, including the documentary.

Prerequisite: None.

T-RTV 103 Broadcast Announcing and Performance I 3 4 5

An introduction to the problems the radio and television announcer-performer faces in the two media, with emphasis in the analysis, interpretation, and communications of a variety of types of announcing-performance projects. The course is further designed to give the student background and experience in relating his speech, personality, character, and temperament to broadcast speech communication and to familiarize the student with basic radio and television studio equipment and broadcast procedures.

Prerequisites: T-ENG 101 and T-RTV 101.

T-RTV 104 Broadcast Announcing and Performance II 3 4 5

A continuation of T-RTV 103. Advanced study of the announcer's techniques, with practice in sight reading of all types of continuity.

Prerequisite: T-RTV 103.

T-RTV 105 Broadcast Announcing and Performance III 3 4 5

A continuation of the study of basic broadcasting procedures.

Prerequisites: T-RTV 103 and T-RTV 104.

T-RTV 106 Programming 3 2 4

A study of the program schedule and station image, audience determination, sources and effects of public service programs, and NAB programming codes.

Prerequisite: None.

T-RTV 107 Broadcast Sales and Promotion 3 2 4

An examination of rate cards and other sales tools, preparing and delivering sales presentations, obtaining and retaining accounts, and a look at agencies, administration, and compensation.

Prerequisite: None.

T-RTV 109 FCC Rules and Regulations 2 0 2

To prepare technicians for the third class radio-telephone operator's license examination as administered by the General Communications Commission.

Prerequisite: None.

T-RTV 110 Broadcast Operations—Traffic 3 4 5

The study of fundamental processes and procedures utilized in broadcast control and studio areas, including logging, announcing, and format. The operation of audio equipment including recorders and players.

Prerequisite: T-RTV 101 and FCC 3rd. Class Radio-Telephone license.

T-RTV 114 Commercial Writing and Production 3 2 4

Learning how to combine showmanship with salesmanship: the use of dialogue, sound effects and music, special acoustical effects, drama, comedy, jingles, and verse for appealing commercials.

Prerequisite: None.

T-RTV 115 Radio Production Techniques 3 2 4

Creating a show! The study of format, talent sources, personnel, and techniques, of themes and intros, commercial integration, program balance, timing, cues, and hand signals.

Prerequisite: T-RTV 110.

T-RTV 199 Broadcasting Practicum 0 12 4

The student will work in an actual broadcasting station under the supervision of station management and CCTI instructors. This will enable him to observe and taken part in the actual functioning of a station.

Prerequisites: T-RTV 101; 102; 103; 104; 107; 110; 114; 115.

SOCIAL SCIENCE**T-SCC 201 Social Science** 3 0 3

An integrated course in the social sciences, drawing from the fields of anthropology, psychology, history, and sociology.

Prerequisite: None.

T-SCC 202 Social Science 3 0 3

A further study of social science with emphasis on economics, political science, and social problems as they relate to the individual.

Prerequisite: T-SCC 201.

T-SCC 205 American Institutions 3 0 3

A study of the effect of American social, economic, and political institutions upon the individual as a citizen and as a worker. The course dwells upon current local, national, and global problems view in the light of our political and economic heritage.

Prerequisite: None.

SOCIOLOGY**T-SOC 102 Principles of Sociology** 5 0 5*

An introductory course in the principles of sociology. An attempt to provide an understanding of culture, collective behavior, community life, social institutions and social change. Presents the scientific study of man's behavior in relation to other men, the general laws affecting the organization of such relationships and the effects of social life on human personality and behavior.

Prerequisite: None.

SPEECH**T-SPH 100 Voice and Diction** 3 2 4

The study of effective voice production and articulation, acceptable pronunciation, intonation, rhythm, and phrasing; a consideration of elementary vocal anatomy and the fundamentals of the science of sound. Specific speech problems will be handled on an individual basis.

Prerequisite: None.

VETERINARY**T-VET 110 Large and Small Animal Breeds** 5 0 5

The study of the common breeds of domestic animals including canines, felines, porcines, ovines, equines, bovines and poultry. Breed characteristics

* Five hours for Police Science Three hours for other curriculums.

and fundamental breeding and management procedures will be covered. Field trips will be scheduled when possible.

Prerequisite: None.

T-VET 120 Anatomy and Physiology 3 4 5

A study of the structure and functions of the following systems of the canine: circulatory; nervous, digestive; urinary; skeletal; respiratory; muscular; endocrine; lymphatic and reproductive. Detailed regional dissection will be performed on some of the more important systems and structures. Other domestic animals will be compared to the canine as time permits.

Prerequisite: T-BIO 105.

T-VET 130 Laboratory Techniques I 2 4 4

This course is an introduction of basic laboratory techniques involved in bacteriology, mycology, hematology, and urinalysis. Lectures and demonstrations will support the performance of the various laboratory tests. Proper use and care of laboratory equipment will be emphasized.

Prerequisite: T-BIO 105.

T-VET 132 Animal Parasitology 3 4 5

In this course the common parasites of domestic animals are presented as to classification, life cycle, pathology produced, laboratory diagnosis, and control. Emphasis is placed on laboratory diagnosis and control measures—drugs, sanitation measures and control of intermediate hosts. Each student will collect and identify several different parasite specimens.

Prerequisite: None.

T-VET 134 Small Animal Care 2 4 4

The areas of study involved in the care of small animals include proper methods of restraint and handling techniques in procuring samples (blood, urine, feces, skin scrapings) for laboratory study; proper administration of drugs orally and parenterally; pre- and post-operative care of surgical patients; feeding practices; kennel sanitation; and grooming.

Prerequisite: T-VET 130.



T-VET 240 Clinical Practices I

2 4 4

This course is presented entirely in a veterinary hospital that has both a large and small animal practice. Here the student is placed in a real hospital situation and performs in the following areas: reception of animals (small and large); assists with examination and treatment of all animals; assists in surgery; performs laboratory tests; makes radiographs; administers medications; helps to maintain proper hospital sanitation; and accompanies the veterinarian on large animal farm calls to give needed assistance.

Prerequisite: T-VET 130.

T-VET 242 Laboratory Technique II

2 4 4

A continuation of T-VET 130. In this course the student performs detailed macroscopic, microscopic, and chemical tests on blood, urine, feces and other body secretions and excretions. Culture and identification of bacteria and fungi is performed. Ability to perform the various tests and procedures proficiently is emphasized.

Prerequisite: T-VET 130.

T-VET 244 Pharmacology

3 2 4

This course entails a study of drugs and other substances of veterinary medical importance. Basic terminology, usage, measurement, administration and storage of drugs is emphasized.

Prerequisite: T-MAT 100A.

T-VET 250 Nutrition

3 2 4

This is a course dealing with the principles of nutrition and their application to feeding practices of domestic animals. Emphasis will be placed on the following: nutritional requirements of each class of animals; ration formulation; special problems involved in feeding convalescent animals. Field trips will be made to different farms to observe feeding operations and to feed mills to observe operations incident to mixing a ration.

Prerequisites: T-BIO 105, T-CHM 101, VET 110.

T-VET 252 Small Animal Clinic I

2 4 4

In this course the student applies further with more proficiency the principles and practices learned in T-VET 130, T-VET 134, and T-VET 242. Additionally, the following two areas of study are introduced: X-Ray techniques (safety rules, positioning of patient, making radiographs, development procedures, and proper care of equipment) and operating room procedures including proper care and use of surgical equipment and supplies. Small animal surgery will be conducted by the veterinarian with students as assistants.

Prerequisites: T-VET 130, T-VET 134, T-VET 242.

T-VET 254 Animal Pathology

3 2 4

Designed to acquaint the student with the fundamentals of pathology including terminology and study of the common diseases of domestic animals. Necropsies of animals affected with various diseases will be conducted when possible.

when possible. Terminology and care of the convalescent animal will be emphasized.

Prerequisite: T-VET 120.

T-VET 256 Clinical Practices II

2 4 4

A continuation of T-VET 240. Student is required to work more independently and learn more of the details involving the areas of reception, handling, care, treatment, and laboratory tests incident to large and small animals and the operation of a veterinary hospital.

Prerequisites: T-VET 130, T-VET 134, T-VET 240, and T-VET 242.

T-VET 260 Entomology

2 2 3

A study of the arthropods of veterinary medical importance in relation to identification, life cycle, pathology, and control. Each student will be

required to collect and identify several different types of arthropods. Field trips will be made when possible.

Prerequisite: None.

T-VET 262 Small Animal Clinic II 3 6 6

A continuation of T-VET 252. Students will be exposed to a wider variety of clinical situations. The student should perfect techniques incident to animal care and perform with greater independence.

Prerequisite: T-VET 252.

T-VET 264 Veterinary Office Practices 4 0 4

This course is designed to teach the student the fundamental principles involved in the following areas: developing good public and client relations, proper telephone etiquette, hospital attire; appointments and records; ethics; first aid for clients and patients; job application. Field trips to several veterinary hospitals will be taken to observe the office practices used in different hospitals.

Prerequisite: None.

T-VET 266 Clinical Practices III 2 4 4

This course is a continuation of T-VET 256 and is preparatory toward immediate employment upon completion. All phases of animal care and other areas relevant to the operation of a veterinary hospital will be covered as the student works in the hospital.

Prerequisites: T-VET 252, T-VET 256.

T-VET 299 Cooperative Work Experience 0 40 4

This is an actual supervised work experience with a practicing veterinarian during the interim summer quarter between the first and second year.

WELDING

WLD 1104 Welding 2 4 3

A study of electric welding, oxacetylene welding, and cutting applicable to the automotive trade. Students will practice welding and cutting techniques on automotive problems and learn to perform mechanical testing and inspection to determine quality of the work. Brazing and hard and soft soldering will be covered.

Prerequisite: None.

WLD 1120 Welding: Oxycetylene 3 9 6

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of unit. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead positions, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction.

Prerequisite: None.

WLD 1121 Welding: Arc 2 9 5

The operation of A. C. transformers and D. C. motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weakness in welding. Safety procedures are emphasized throughout the course.

Prerequisite: None.

WLD 1124 Welding: Pipe 2 6 4

Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.

Prerequisite: WLD 1121.

SPECIAL PROBLEMS COURSES FOR STUDENTS ATTENDING SCHOOL ON G.I. BILL

G.I. students in the vocational programs must enroll for 30 hours per week and G.I. students in the technical programs must enroll for 25 hours per week to be eligible for full G.I. benefits. In some instances, G.I. students will have to enroll in special courses in order to comply with regulations.

Special problems courses will provide the student with additional assigned study in the students' major area of study under supervision of an instructor. Listed below are course prefixes, course numbers, and number suffixes that will be used in special problems courses for students who need additional hours of instruction to receive full G.I. benefits. Special problems courses will be reported as laboratory study and students will be given credit and the grade will be computed in the grade point average. A record of attendance will be maintained.

The first two letters (SP) indicate that it is a special problem; the third letter designates the curriculum. A—Automotive Mechanics; I—Industrial Maintenance. Suffixes A, B, C, D, E, F, and S designate the quarter in which a student enrolls in a special problems course.

- A—designates 1st. year, Fall Quarter
- B—designates 1st. year, Winter Quarter
- C—designates 1st. year, Spring Quarter
- D—designates 2nd. year, Fall Quarter
- E—designates 2nd. year, Winter Quarter
- F—designates 2nd. year, Spring Quarter
- S—designates Summer School

Special Problem prefixes and numbers for trade curriculums:

- SPA 1199 A-B-C-D-E-F-S Automotive Mechanics
- SPI 1199 A-B-C-D-E-F-S Industrial Maintenance
- SPT 1199 A-B-C-D-E-F-S Tool Maker
- SPR 1199 A-B-C-D-E-F-S Radio-TV Broadcasting

Technical Special Problem prefixes and numbers:

- T-SPA-200 A-B-C-D-E-F-S Agriculture
- T-SPB-200 A-B-C-D-E-F-S Business Administration
- T-SPD-200 A-B-C-D-E-F-S Drafting and Design
- T-SPE-200 A-B-C-D-E-F-S Electronics
- T-SPS-200 A-B-C-D-E-F-S Secretarial Science
- T-SPV-200 A-B-C-D-E-F-S Veterinary Medical

ADULT HIGH SCHOOL DIPLOMA

The Department of Community Colleges in cooperation with the Department of Public Instruction has established procedures whereby adults heretofore deprived of the opportunity of completing high school, may do so, and receive a diploma for same.

This arrangement is contingent upon an agreement of affiliation between the Technical Institute in question and the local high school. Central Carolina Technical Institute now has signed agreements of this nature with the following high school systems; Sanford City



Schools, Lee County Schools, Chatham County, Harnett County, and Moore County Schools. This means that when the adult student has completed the necessary studies at CCTI Learning Lab or one of the branching labs in Chatham or Harnett Counties, (information on the location of these labs may be obtained at CCTI) he or she is given an adult high school diploma by whichever of the above mentioned high school systems is appropriate.

ADULT EDUCATION

In addition to preparing students for initial employment, the Center is designed to meet the needs of adults for education in: the basic reading, writing, and arithmetic subjects needed to complete formal school education; avocational areas, and any other areas which are useful or of interest to the adult and his or her community.

Courses in general adult education and community services include, but are not limited to:

Consumer Education
Homemaking
Parent Education
Family Life
Industrial Arts
Academic Elementary Grades
1-8

Citizenship
Health and Safety
Creative Arts
Foreign Languages
Language Arts
Academic High School Grades
8-12

Discussion Groups

Requirements for admission are:

Admission requirements may vary with specific courses—these may be determined by contacting the Director of Adult Education at the Institute. Most programs do not have admission requirements other than the general age level—high school graduates or schoolleavers 18 years of age or over.

Expenses vary with the course(s) undertaken, but may include, as a minimum, those charges incidental to instructional supplies, textbooks, and other materials when these are used. All costs of avocational instruction must be borne by students.

THE LEARNING LABORATORY

The Fundamentals Learning Laboratory has a threefold function. Its primary function is to prepare students for high school certificates. Its second function is to prepare high school graduates for entrance into institutions of higher learning, and its third function is to offer courses to persons who are interested in studying for personal or occupational improvement.

Practically every academic skill or subject that is taught from the elementary school level through early college level is being offered



by the laboratory. All the courses of study are auto-instructional, commonly referred to as programmed materials.

In these materials is a much different teaching pattern than is normally found in a regular classroom. The courses of study appear in both book and machine formats. The course of study, or program, presents a body of knowledge in a sequence of steps called frames: each of these steps adds a bit to what the student already knows, and requires that the student respond to show that he has acquired the new knowledge. A bit of the already acquired knowledge is integrated into the new frame: thus, a correct response is almost always assured. The correctness of response is immediately verified and the student proceeds to the next frame. Upon completion of a set of frames (usually several hundred) that teach a full concept, a test is provided to check on comprehension and retention of facts of that part of the program. Similarly, a final examination of the entire program checks comprehension of the subject.

The "Laboratory" opens its doors at 8:00 in the morning and remains open until 10:00 in the evening. Attendance is greatest at night because most students are working during the day. However, a number of students attend during the morning and afternoon hours because they are employed on second and third shifts.

At the initial interview the prospective student is given an explanation of the nature of the learning materials, how the "lab" operates, and what is expected of him.

The next step includes placement exercises or tests which show how much the student already knows in the areas in which he plans to study. Once the student and the coordinator know where the student is academically, and where he wishes to go vocationally, he is then placed in the materials and goes to work. From this point on the student is on his own. The coordinator is present to help the student when he encounters difficulties with the mechanics of the program, and to assure that the student is supplied sufficient materials to allow him to reach his goal.

In summary, it can be said that the student steers his own course. Opposed to his previous school experience, he no longer relies on the teacher to provide him with the essential subject matter. The responsibility for his accomplishments rests entirely on him. The coordinator stands by to direct him through the shortest possible list of learning tasks which will gain his objectives.



THE EXTENSION PROGRAM

EXTENSION COURSE

An "extension course" may be defined as a part-time course which does not count toward a diploma or degree, but for which a certificate of completion may be given. Extension courses may be academic, technical, vocational or for general self-improvement.

ADMISSION REQUIREMENTS

Occupational educational extension courses are designed to serve adults who are employed or are seeking employment at the skilled, technical and sub-professional levels. Any adult 18 years old or older who needs training or re-training, or who can otherwise profit from the proposed course, may be enrolled. Enrollees who are employed normally attend training during their non-working hours to increase their skills and understandings, to improve their competency and qualify for advancement.

PROGRAM COURSES

Courses are taught both at and away from the Institute. They may be single subjects or groups of related subjects. The following type classes fall into the extension category:

Firemanship Training
 Police Training
 Community Services
 New Industry Training
 Nursing Education
 Supervisory Development Training

Job Safety Training for Telephone Companies
 Distributive Education
 Vocational and Technical Courses

A brochure containing a complete list of suggested extension courses may be obtained by request to the Director of Extension. Though the list is very comprehensive, offerings are not limited to only those listed. Each extension program is offered to meet the demands of a community. In general, any subject can be presented, provided an instructor can be obtained and 10 or more students are enrolled.



CENTRAL CAROLINA TECHNICAL INSTITUTE

ROUTE 2, BOX 55

SANFORD, NORTH CAROLINA 27330

Attach Photograph Here
(Year Taken)

(Please Print or Type)
Complete All Spaces and
Sign at Bottom

STUDENT APPLICATION FORM

PERSONAL

NAME ☐ Mr.							
☐ Mrs.							
☐ Miss							
(Last)		(First)		(Middle)		(Maiden Name if Married)	
ADDRESS							
(Street or R.F.D.)		(City)		(County)		(State)	
(Zip)		(Home Phone)					
Veteran	Yes ☐	No ☐	Date of Birth	Age	Race	Sex	Height
On G.I. Bill	Yes ☐	No ☐					Weight
							Soc. Sec. Number
MARITAL STATUS ☐ Single ☐ Married ☐ Separated ☐ Divorced ☐ Widowed ☐ No. of Children							
Husband's or Wife's Name							
If Single Give Parent's Name and Address					Father's Occupation		

REFERENCES

List Two Persons Who Know You	Address	Years Known You
1.		
2.		

WORK

Last Two Places Employed	Occupation	Shift	Yr. Started	Yr. Stopped	Yrs. Worked
1.					
2.					

EDUCATION

Last High School Attended and Address	Graduated, or Expect to Graduate
	Mo. Yr.
College(s) Attended	Length Attended
	Semesters Quarters
Circle Highest Grade Completed:	6 7 8 9 10 11 12 13 14 15 16

Check Below Program You Wish to Study While at Central Carolina Technical Institute

A. TECHNICAL—Associate Degree Programs

AGRICULTURAL AND BIOLOGICAL

- ☐ Agricultural Business and Research Technology
☐ Veterinary Medical Technology
 (Veterinary Assistant)

ENGINEERING

- ☐ Electronics Technology
☐ Drafting & Design: Mechanical Technology

GENERAL EDUCATION

- ☐ General Education
☐ College Transfer Option

BUSINESS

- ☐ Business Administration Technology
☐ Secretarial Science Technology
 ☐ Engineering
 ☐ Executive
 ☐ Legal
 ☐ Medical

PUBLIC SERVICE

- ☐ Police Science Technology

OTHER

- ☐ Specify:

B. VOCATIONAL—Diploma Programs

- ☐ Automotive Mechanics
☐ Industrial Maintenance: Electromechanical
☐ Machinist-Toolmaker

- ☐ Practical Nurse Education
☐ Radio T-V Broadcasting
☐ Other (specify)

EXPECT TO ENTER: 19 ... ☐ Fall Qtr. ☐ Winter Qtr. ☐ Spring Qtr. ☐ Summer Qtr.

CHECK OR CIRCLE SUBJECTS THAT YOU COMPLETED IN HIGH SCHOOL/COLLEGE/OTHER:

- | | | | | |
|---|---------------------------------------|------------------------------------|------------------------------------|--|
| ☐ Agriculture I, II, III | ☐ General Math | ☐ Calculus | ☐ Physics | ☐ Bookkeeping |
| ☐ Algebra I, II, III | ☐ Geometry | ☐ Chemistry | ☐ Shorthand | ☐ Typing I, II, III |

(Signature of Student)

(Date)

